Summer 7-31-2020

Symptom Presentation of Sexually Abused Youth: Associations with Abuse Attributions

Brittany Biles

University of Nebraska - Lincoln, brittanysutton2015@gmail.com

SYMPTOM PRESENTATION OF SEXUALLY ABUSED YOUTH: ASSOCIATIONS WITH ABUSE ATTRIBUTIONS

by

Brittany Biles

A DISSERTATION

Presented to the Faculty of

The Graduate College at the University of Nebraska

In Partial Fulfillment of Requirements

For the Degree of Doctor of Philosophy

Major: Psychology

Under the Supervision of Professor David J. Hansen

Lincoln, Nebraska

July 2020

SYMPTOM PRESENTATION OF SEXUALLY ABUSED YOUTH: ASSOCIATIONS WITH ABUSE ATTRIBUTIONS

Brittany Biles, Ph.D.

University of Nebraska, 2020

Advisor: David J. Hansen

Child sexual abuse (CSA) outcomes are heterogeneous. Some victims display a combination of externalizing behaviors (e.g., aggression) and internalizing symptoms (e.g., depression), while others present with minimal symptoms (Domhardt, Munzer, Fegert, & Goldbeck, 2015). Among the factors that have been explored as relating to CSA outcomes are child characteristics (e.g., age; Dube et al., 2005), abuse-specific variables (e.g., abuse severity; Stroebel et al., 2012), and family variables (e.g., familial social support; Ryan, Kilmer, Cause, Watanabe, & Hoyt, 2000). Although much of the literature supports these factors as contributing to outcomes following CSA, conclusions have been inconsistent. Research has begun to investigate cognitive factors, such as abuse attributions, to attempt to explain differences in outcome. Attributions specific to sexual abuse include attributions of self-blame and guilt, personal vulnerability, dangerous world, and empowerment. Understanding how abuse attributions relate to symptom presentation can provide information about how the attributions can be targeted in treatment. The purpose of the current study was to (a) determine subgroups of CSA survivors based on patterns of symptom presentation, (b) examine differences between each group on endorsements of abuse attributions (e.g., self-blame/guilt), and (c) examine how changes in internalizing and externalizing symptoms associate with changes in sexual abuse attributions over the course of treatment for the groups.

Participants included 153 sexually abused youth and their non-offending caregivers presenting for treatment. The study utilized self-report and caregiver-report measures administered at differing time points throughout treatment. Findings showed four distinct cluster groups, providing evidence for diversity in CSA outcomes (i.e., Subclinical, Marginal Self-Reported Distress, Parent-Reported Child Distress, and Highly Distressed). Results indicated that there were significant differences between cluster groups regarding overall attributions, self-blame and guilt, personal vulnerability, and dangerous world. Groups did not significantly differ on empowerment. Findings demonstrated a positive relationship between changes in emotional distress and changes in attributions at post-treatment, indicating that as CSA youth reported greater improvements in emotional distress, they also reported greater reductions in negative abuse attributions.

ACKNOWLEDGEMENTS

This project would not be in existence without the Child Advocacy Center (CAC) in Lincoln, Nebraska and Project SAFE. Thank you to Dr. David Hansen for his help and encouragement on this research project as well as with all of my professional interests. Thank you to Dr. Mary Fran Flood for her unrelenting support and expertise. I am forever grateful to them both for their guidance in my research and clinical work. I am further appreciative for my supervisory committee, Drs. Tim Nelson, Cal Garbin, and Natalie Williams. Their generous contributions advanced this project.

I would like to thank the graduate students of the Child Maltreatment Lab for the abundance of feedback they provided regarding this project and numerous drafts they read for me. Thank you to the undergraduate research assistants in the lab for organizing and coding the data.

I could not have done this without the unwavering love and support from my friends and family. Thank you to my husband, Jason, my mom, and my sister for their encouragement.

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION AND LITERATURE REVIEW

Child sexual abuse (CSA) is a pervasive problem, and there is continued need for effective prevention and intervention efforts due to the considerable risk for mental health problems in victims of CSA. It is well known that sexual abuse is a widespread problem, but prevalence rates often differ between studies. For example, Barth, Bermetz, Heim, Trelle, and Tonia (2013) reviewed the literature spanning 24 countries. They indicated that prevalence rates ranged from 8% to 31% for females and 8% to 17% for males. On the other hand, Pereda, Guilera, Forns, and Gomez-Benito (2009) illustrated that 19.7% of females and 7.9% of males experienced sexual abuse before the age of eighteen. In a meta-analysis by Stoltenborgh, van IJzendoorn, Euser, and Bakersmans-Kranenburg (2011), it was estimated that CSA rates ranged between 16.4% and 19.7% for females and between 6.6% and 8.8% for males before the age of eighteen. Lastly, a recent review by Townsend and Rheingold (2013) estimated that 1 in 10 children will experience sexual abuse before the age of eighteen, and 1 in 7 females and 1 in 25 males will experience sexual abuse before the age of eighteen.

Potential reasons for differing rates of CSA include underreporting, methodological issues for measuring prevalence, and inconsistent definitions of CSA (Andrews, Corry, Slade, Issakidis, & Swanston, 2004; Edgardh & Ormstad, 2000; Finkelhor, 1994; Friedenberg, Hansen, & Flood, 2013). For example, some definitions of CSA are more inclusive than others. An inclusive definition from the Child Abuse Prevention and Treatment Reauthorization Act of 2010 states that sexual abuse includes:

> "The employment, use, persuasion, inducement, enticement, or coercion of any child to engage in, or assist any other person to engage in, any sexually explicit

> conduct or stimulation of such conduct for the purpose of producing a visual depiction of such conduct; or the rape, and in cases of caretaker or interfamilial relationships, statutory rape, molestation, prostitution, or other form of sexual exploitation of children, or incest with children" (Child Welfare Information Gateway, 2014).

In contrast, the Centers for Disease Control and Prevention (2010) has a less inclusive definition of CSA, stating that sexual abuse includes fondling, attempted intercourse, or completed intercourse by an individual that is at least five years older than the victim.

In addition to the ample amount of research on the prevalence rates of CSA, there is also an abundance of literature focused on the heterogeneity of outcomes following sexual abuse. Research has indicated that some victims of CSA may display externalizing behaviors (e.g., aggression, risky behavior) and internalizing symptoms (e.g., depression, anxiety), while others may present as asymptomatic or with minimal symptoms (Domhardt, Munzer, Fegert, & Goldbeck, 2015; Finkelhor & Berliner, 1995; Hebert, Tremblay, Parent, Daignault, & Piche, 2006; Kendall-Tackett, Williams, & Finkelhor, 1993; Paolucci, Genuis, & Violato, 2001; Putnam, 2003; Roberts, O'Connor, Dunn, & Golding, 2004).

In one study, children whose ages ranged from birth to 14 years-old were scored on levels of varying psychopathology following sexual abuse (McCrae, Chapman, & Christ, 2006). The results demonstrated that 20% of children displayed clinical levels of depression and 19% had symptoms of post-traumatic stress and anxiety. Additionally, Calam, Horne, Glasgow, and Cox (1998) examined changes of self-reported symptomology across time for children and adolescents who were alleged or suspected to

have been sexually abused. Results exemplified an increase in reported symptomology at the nine-month follow up compared to their report of symptomology at four-weeks post-disclosure. Findings by Calam and colleagues (1998) and McCrae et al. (2006) provided evidence for a relationship between CSA and symptomology. These results are consistent with other studies demonstrating that children who have been sexually abused are at greater risk for developing psychopathology (Putnam, 2003; Roberts et al., 2004).

Similarly, Hebert and colleagues (2006) examined the relationship between CSA and outcomes in children who were sexually abused. Their clinical sample consisted of 63 children with a history of CSA and their caregivers. The comparison group (n = 63) consisted of children and their caregivers with no history of CSA and was matched on child age and gender. Per parent report, results suggested that children who had been sexually abused displayed considerably more internalizing, externalizing, and sexualized behaviors compared to children with no reported history of CSA (Hebert et al., 2006). However, not all children with a history of CSA presented with clinical levels of symptomology (e.g., anxiety, aggression), which is consistent with other studies showing there is no definitive outcome or symptomology pattern that children with a history of CSA display following abuse (e.g., Paolucci et al., 2001; Putnam, 2003).

Some studies have explored differences in outcomes for CSA victims by creating groups based on symptom presentation, abuse characteristics, and family environment (Sawyer & Hansen, 2014; Sedlar, 2001; Trickett, Noll, Reiffman, & Putnam, 2001; Yancey, Hansen, & Naufel, 2011). For example, Trickett and colleagues (2001) investigated short- and long-term negative outcomes of CSA by creating groups based on abuse-related characteristics (e.g., relationship to perpetrator). The sample consisted of

girls between the ages of 6 and 16 years old with a history of sexual abuse. Results showed statistically unique patterns of symptomology across three different groups based on abuse-related characteristics. Group 1 consisted of girls who were sexually abused by multiple biological perpetrators, group 2 consisted of girls who were sexually abused by a single biological perpetrator, and group 3 consisted of girls who were sexually abused by their biological father. Each group corresponded with different short- and long-term symptomatology (e.g., depression, aggression). However, one limitation of the study was that it included only victims of intrafamilial sexual abuse (excluding extrafamilial abuse, which potentially could have differing outcomes). Nonetheless, these findings are consistent with other CSA outcome literature illustrating the importance of treating victims of sexual abuse as a heterogeneous group due to immense variability within this population (Sawyer & Hansen, 2014; Yancey et al., 2011).

To effectively treat children who have been sexually abused, understanding diverse outcomes is needed to tailor treatment to individual differences. Therefore, research has explored other factors to explain the variability in CSA outcomes, including factors related to the child, their abuse experience, and their family.

Factors Related to Child Sexual Abuse Outcomes

Factors that have been investigated in relation to outcomes following CSA include child characteristics, including age and gender (Dube et al., 2005; Yancey & Hansen, 2010), abuse-specific variables, such as abuse severity and relationship to perpetrator (Fischer & McDonald, 1998; Stroebel et al., 2012), and family variables (e.g., familial social support; Ryan, Kilmer, Cause, Watanabe, & Hoyt, 2000). Although much of the literature supports the notion that these variables contribute to inconstant outcomes

following sexual abuse, there continue to be inconsistencies in conclusions. For example, Paolucci et al. (2001) posited that research is limited when trying to explain diverse outcomes because not all researchers investigate the same variables, likely contributing to the discrepancies within the sexual abuse literature. Though not amenable to change, it should be noted that child characteristics, abuse-specific variables, and familial factors are important contextual factors to consider when implementing treatment.

Child Characteristics

Gender of victim. The relationship between gender of the victim and different outcomes following CSA has been a popular area of interest within the sexual abuse literature. Most of the prior literature has focused on female victims due to various reasons (e.g., underreporting for males leading to misrepresentation of prevalence rates for males; Barth et al., 2011). However, there have been studies comparing potential differences between female and male victims in the literature. Some research demonstrates that female and male victims of CSA have similar outcomes (Dube et al., 2005; Romano & DeLuca, 2001). Other research indicates that female victims present with more internalizing symptoms than externalizing symptoms, while male victims present with more externalizing symptoms than internalizing symptoms (Kendall-Tackett et al., 1993; Putnam, 2003; Ullman, 2007).

Maikovich-Fong and Jaffee (2010) used a nationally representative sample of children in the United States with a history of involvement with Child Protective Services to explore gender differences in CSA outcomes. Findings suggest that female and male victims of CSA are equally at risk for developing internalizing, externalizing, or trauma symptoms following their sexual abuse experience. These results are like other studies

showing that male and female victims tend to have similar outcomes following sexual abuse (Dube et al., 2005; Romano & DeLuca, 2001).

Although other studies support the finding of no gender differences in symptom presentation, there are exceptions to this conclusion. Gray and Rarick (2018) explored gender differences in consequences of CSA and findings showed significant differences in outcomes between female and male victims. Results revealed that females reporting a history of CSA were more likely than males to experience depressive symptoms and suicidal ideation. Males reporting a history of CSA were more likely than females to engage in substance use (Gray & Rarick, 2018). Similarly, Young, Bergandi, and Titus (1994) used a sample of children ages 8 to 11 to compare current functioning between a group of children who reported experiencing sexual abuse and a group of children who did not disclose any abuse. For the victim group, there were 20 males and 20 females. The comparison group had the same amount of non-abused children matched on various factors (e.g., socioeconomic status, age). Surprisingly, their results demonstrated differences between females and males regardless of whether the children were sexually abused or not abused. Specifically, Young and colleagues (1994) found that male children exhibited more externalizing behavior (e.g., aggression) and less internalizing symptoms (e.g., depression) compared to female children, regardless of sexual abuse history.

Age of victim. The victim's age is another variable that has been considered as influencing sexual abuse outcomes. Young children may not fully comprehend the abuse and, in turn, may not display symptoms compared to older children and adolescents who may have a better understanding of the impact of their abuse experience. Although age

has been collected and has been used to describe the sample, research has been unable to determine exactly how the victim's age influences short- and long-term consequences associated with child sexual abuse.

One review conducted by Trickett and McBride-Chang (1995) examined the literature through a developmental perspective. Their goal was to explore how victims' age impacts symptomology following child maltreatment (i.e., physical abuse, sexual abuse, and child neglect). Interestingly, results illustrated that younger children tended to exhibit more anxiety symptoms and somatic complaints compared to older children, who were more likely to display symptoms of depression (Trickett & McBride-Chang, 1995). However, they noted that this may not accurately reflect how CSA outcomes are influenced by age because most studies have an overrepresentation of female victims compared to male victims. Thus, there could be gender differences not accounted for during different developmental ages.

Deblinger, Taub, Maedel, Lippmann, and Stauffer (1997) found that victim age was associated with internalizing symptoms when using parent-report instead of victim self-report measures ($N = 96$). Specifically, older children were more likely to display internalizing symptoms if the onset of abuse occurred when the child was older compared to when the child was younger. A strength of this study was that the researchers controlled for other variables that could potentially contribute to differences in outcome following CSA, such as gender, the relationship between victim and perpetrator, and severity of abuse (Deblinger et al., 1997).

In contrast, Bergen, Martin, Richardson, Allison, and Roeger (2004) longitudinally investigated how victims' age relates to externalizing behaviors (e.g.,

substance use, suicidality, aggression) for high school students reporting a history of sexual abuse. They assessed adolescents at ages 13, 14, and 15. Results illustrated no relationship between age of victim and externalizing behaviors. In addition, findings revealed that age did not moderate the relationship between CSA and outcomes across the three time points (Bergen et al., 2004). However, the restricted developmental age range might have influenced outcomes compared to using a sample of younger children or older adolescents. Nonetheless, these results were consistent with a meta-analysis by Paolucci et al. (2001) that included 37 studies, totaling 25,367 participants. One aspect of the meta-analysis found no significant association between age of victim when sexual abuse occurred and symptom presentation (e.g., PTSD, depression, sexual promiscuity).

Abuse-Specific Characteristics

Mennen and Meadow (1995) and Trickett, Reiffman, Horowitz, and Putnam (1997) discussed how the relationship between certain child characteristics and outcomes may be compounded by abuse-specific characteristics. Therefore, it is important to briefly discuss and provide an overview of the literature regarding how the severity of sexual abuse and victim-perpetrator relationship relates to sexual abuse outcomes.

Severity of sexual abuse. Severity of abuse is typically discussed as penetration (oral, digital, vaginal, or anal) versus non-penetrative abuse (fondling, pornography, exposure). Within the CSA literature, sexual abuse that involves some type of penetration is usually considered more severe than sexual abuse that does not involve penetration (Dube et al., 2005; Kendall-Tackett et al., 1993). Although other factors (e.g., use of force, use of weapons) can contribute to severity of abuse, for the sake of

parsimony, the current overview discusses severity of abuse as penetrative versus non-penetrative abuse.

Overall, a review by Beitchman, Zucker, Hood, and DaCosta (1991) found support for a significant relationship between severity of abuse and negative outcomes in children who were sexually abused. For example, most of the studies illustrated that children subjected to more severe abuse (i.e., including some type of penetration, violence, or a weapon) were more likely to exhibit higher levels of negative outcomes compared to children who did not experience either penetration, violence, or a weapon (Beitchman et al., 1991). Likewise, Dube et al. (2005) revealed that both female and male victims who experienced more severe levels of abuse had higher levels of risk for negative outcomes. Also, findings from a study by Ketring and Feinauer (1999) demonstrated that women who reported more severe abuse exhibited worse outcomes compared to women who reported less severe abuse.

However, Paolucci and colleagues (2001) found no support for a relationship between sexual abuse involving contact (e.g., fondling, penetration) compared to non-contact sexual abuse (e.g., pornography, exposure) and symptomology (e.g., Posttraumatic Stress Disorder, depression, sexual promiscuity). In addition, their findings demonstrated no indication that severity of abuse changed the relationship between history of CSA and symptomology for victims. Consistent with findings by Paolucci et al. (2001), another study did not find evidence for a relationship between abuse-related factors (e.g., abuse severity and duration of abuse) and child functioning at either the 3-month or 12-month period following disclosure of sexual abuse (Manion, Firestone, Cloutier, Ligezinska, McIntyre, & Ensom, 1998).

Relationship between victim and perpetrator. The CSA literature has examined differences in relationships between victims and perpetrators to determine if outcomes differ based on extrafamilial versus intrafamilial relationships (Yancey & Hansen, 2010). Perpetrators considered as extrafamilial may include friends of the family, coaches, teachers, and other people close to the child but not a family member. Intrafamilial perpetrators are people within the child's family such as biological parents, adoptive parents, siblings, grandparents, and etc.

Two reviews (see Beitchman et al., 1991 and Kendall-Tackett et al., 1993) revealed an association between victim-perpetrator relationship and outcomes following CSA. For instance, children sexually abused by intrafamilial perpetrators were more likely to present with negative outcomes compared to children sexually abused by extrafamilial perpetrators. The results from the reviews were consistent with other studies showing that victims who were sexually abused by family members displayed more internalizing and externalizing symptoms compared to victims who were sexually abused by non-family members (Hebert et al., 2006; Trickett et al., 2001; Wolfe, Sas, & Wekerle, 1994).

Conversely, one study found no association between victim-perpetrator relationship and victim outcomes following sexual abuse. Stern, Lynch, Oates, O'Toole, and Cooney (1995) looked at whether the relationship between the victim and perpetrator influenced outcomes with children who were sexually abused. Their sample consisted of 84 children (62 girls; 22 boys). Results indicated that there was no relationship between intrafamilial abuse and depression and behavioral outcomes. However, findings

suggested that other abuse-related characteristics, such the severity of abuse, were correlated with outcomes (Stern et al., 1995).

Familial Characteristics

The environment in which the child resides is an important aspect to consider in regards to outcomes. Family factors to consider include perceived social support by parents and family members, family cohesiveness, and family problem-solving skills (Bhandari, Winter, Messer, & Metcalfe, 2011; Seehus, Clifton, & Rellini, 2015; Zajac, Ralston, & Smith, 2015). Research has demonstrated that familial support for the child impacts short- and long-term outcomes (Cohen & Mannarino, 2000; Tremblay, Hebert, & Piche, 1999).

Tremblay, Hebert, and Piche (1999) investigated how perceived social support by family members impacted children's adjustment following their sexual abuse experience. Their sample consisted of 50 (39 girls; 11 boys) inpatient pediatric children. Findings revealed that caregiver support directly affected children's adjustment post-sexual abuse. Particularly, children who felt supported following their disclosure of abuse and had a close relationship with their caregiver displayed fewer externalizing behaviors and reported higher self-worth compared to children who did not feel supported or felt doubted by their caregiver (Tremblay et al., 1999). Consistent with these findings, other studies have illustrated the importance of caregiver support on child outcomes post-sexual abuse. (Feiring, Taska, & Lewis, 1996; Ullman, 2002; Zajac, Ralston, & Smith, 2015).

Other factors relating to the family include family cohesiveness, expressiveness, family conflict, and organization (Fassler, Amodeo, Griffin, Clay, & Ellis, 2005). Fassler

et al. (2005) elucidated that family cohesiveness, expressiveness, and family conflict were all associated with CSA outcomes. Adults with a history of child sexual abuse were more likely to present with psychological distress if their family environment during childhood was less cohesive and had high levels of conflict (Fassler et al., 2005). These findings are consistent with other studies illustrating the importance of family environment and its influence on outcomes following CSA (Bhandari, Winter, Messer, & Metcalfe, 2011; Cohen & Mannarino, 2000).

There is very little literature investigating how family cohesiveness and family problem-solving affects a child's outcome post-sexual abuse, but studies examining other types of child maltreatment and general psychopathology strongly suggest that low cohesion and family problem-solving contribute to later maladaptive outcomes (Seehus, Clifton, & Rellini, 2015; Sheidow, Henry, Tolan, & Strachan, 2014). For instance, Griffin and Amodeo's (2010) findings suggested that family cohesiveness and problem-solving skills impacted later psychosocial functioning for children who had been physically abused.

In conclusion, factors relating to the child, abuse experience, and family have the potential to impact child outcomes following sexual abuse. However, there are inconsistencies within the literature and there continues to be no definitive relationship between these factors and outcomes following sexual abuse. Further, while these contextual factors are important to consider clinically, these variables are typically not the focus of treatment. Thus, cognitive factors, such as abuse attributions, have been investigated as a variable explaining the diverse outcomes associated with child sexual abuse because attributions related to CSA can be modified during treatment (Cohen &

Mannarino, 2002). Attributions specific to sexual abuse impact functioning. Understanding how abuse attributions relate to symptom presentation can further provide information about negative thought patterns and how these can be targeted in treatment to improve functioning following sexual abuse.

Attributions

As noted above, attributions specific to sexual abuse are amenable to change and may provide further clarity regarding diverse outcomes and symptom presentations for youth with a history of CSA. The literature on attributions is vast and extremely broad. There are numerous attribution "theories" spanning across many years. Simplistically, attribution theory is focused on the perceived causes about why a situation occurred in a person's life (Weiner, 1995). Attribution theory is the idea that individuals interpret and perceive events or behaviors by their causes and these interpretations of the situation impact an individual's reaction to that event (Kelley & Michela, 1980). Attribution theory has been associated with various clinical outcomes and treatments and has been extended to child maltreatment populations. Cognitions made about a particular event can create negative thinking patterns, in turn, contributing to a range of mental health symptoms. These negative thinking patterns can be targeted in treatment, which indirectly decreases symptoms.

Attributional and Explanatory Styles

One line of research originated from Seligman, Abramson, Semmel, and von Baeyer (1979) who adapted attribution theory and suggested that attributional or explanatory style refers to cognitive patterns in which individuals view themselves and the world around them to make causal inferences following life events. Dimensions of an

attributional style consist of internal or external factors (i.e., personal factors), stable or unstable factors (i.e., across time), and specific or global factors (Abramson, Seligman, &Teasdale, 1978). For instance, if a student does well on an exam, an internal explanation might be that "I am good at test taking" versus an external explanation might be that "This test was easy." Likewise, if an individual is sitting in traffic and perceives their situation as stable, they might think that "traffic is getting worse and will always be terrible" versus perceiving the situation as unstable (e.g., the traffic is bad today but tomorrow the traffic will be better). Lastly, if an individual attributes one mistake they made at their job as global, they might think that they will continue making mistakes in each task they do. In contrast, if an individual attributes one mistake at their job as specific, they might think they are having difficulty with only that one task and they will get better at that task.

Explanations and evaluations about what have occurred can either be positive or negative, and individuals can have a positive attributional style or a negative attributional style. Individuals are considered to have an optimistic attributional style when they explain successes in their life as internal, stable, and global, and when they explain hardships in their life as external, unstable, and specific. Yet, individuals are considered to have a pessimistic attributional style when they explain successes in their life as external, unstable, and specific, and when they explain hardships in their life as internal, stable, and global (Abramson et al., 1978). When individuals have a more general pessimistic or maladaptive attributional style, they are at higher risk for developing psychopathology, such as depression, compared to individuals who have an optimistic attributional style (Seligman et al., 1979). General attributional style is important

because the way an individual perceives, interprets, and evaluates the causes of their life events influences their functioning.

Attributional style comes from seminal depression theories: the reformulated helplessness model (Abramson, Seligman, & Teasdale, 1978) and the hopelessness model (Abramson, Metalsky, & Alloy, 1989). These theories suggest that individuals with a negative attributional and explanatory style are at risk for current and future episodes of depression. While attributional style originated from depression theories, over time, research has explored how attributional style contributes to other internalizing (e.g., anxiety) and externalizing (e.g., conduct problems) symptoms following stressful life events (e.g., child maltreatment). Findings from these different areas are consistent with the older depression theories, supporting the notion that individuals with negative attributional styles are more likely to develop psychopathology (Alloy, Abramson, Safford, & Gibb, 2006; Gibb et al., 2001).

Child Maltreatment: Attributional and Explanatory Styles

There has been some research examining the relationship between a general negative attributional style and outcomes following child maltreatment, including child neglect and physical, emotional, and sexual abuse. Although victimizations differ, there are similar psychological reactions (Okur, Pereda, Van Der Knaap, & Bogaerts, 2018). When assumptions about themselves and the world around them are broken, victims of child maltreatment are at an increased risk for developing psychopathology. These assumptions include personal invulnerability, perception that the world has meaning, and a positive self-view of oneself (Janoff-Bulman & Frieze, 1983). The following section provides an overview of studies examining whether symptom presentation following

child maltreatment is related to the way children perceive and interpret the cause of their trauma (Feiring, Taska, & Lewis, 2002; Runyon & Kenny, 2002; Toth, Cicchetti, & Kim, 2002). For reviews, see Gibb (2002) and Harkness and Lumley (2008).

Toth, Cicchetti, and Kim (2002) sampled 187 children (57% were boys; 78% identified as African American) with substantiated cases of child maltreatment. Due to the high number of children experiencing multiple forms of child maltreatment, the authors did not delineate subtypes of maltreatment, and the authors operationalized child maltreatment as one homogenous group encompassing children who had been sexually abused, physically abused, emotionally abused, and neglected. The authors also recruited non-maltreated children for a comparison group who were matched on demographic factors (e.g., age, gender). Toth et al. (2002) assessed casual attributions to both positive and negative outcomes or situations (e.g., get a poor grade in school) to investigate if the relationship between general attributional style (i.e., having a positive or negative perception about the causes of life events) and symptomatology differed based on having a history of child maltreatment. Additionally, they examined whether having a negative attributional style moderated the relationship between child maltreatment and externalizing and internalizing outcomes. Interestingly, maltreated- and non-maltreated children did not differ significantly on attributional style. However, results demonstrated that a negative attributional style moderated the relationship between child maltreatment and externalizing behaviors but did not moderate the relationship between maltreatment and internalizing symptoms (Toth et al., 2002). Thus, findings suggest that children are more likely to display externalizing behaviors but not internalizing symptoms when they attribute the cause of their abuse to internal, stable, and global factors.

Kaufman (1991) sampled 56 child victims of maltreatment (ages 7 to 12 years old; 29 girls) and studied the association between having a general negative attributional style and depressive symptoms. Kaufman (1991) hypothesized that the presence of a maladaptive attributional style would be related to a child's depressive symptoms. Results demonstrated that children who attributed their experience of maltreatment negatively (i.e., internal, stable, and global) were more likely to report depressive symptoms compared to children who attributed their experience as external, unstable, and specific. Findings from this study are consistent with other literature indicating that victims of child maltreatment exhibiting a negative attributional style are at greater risk for developing internalizing symptoms (Brown & Kolko, 1999; Lumley & Harkness, 2007).

Further, Runyon and Kenny (2002) investigated the relationship between a negative attributional style, symptoms of depression, and trauma-related distress among children who reported a history of abuse. They included children who were either physically abused (n = 67) or sexually abused (n = 31). They hypothesized that a negative attributional style would be associated with self-reported symptoms of depression and trauma-related distress. Consistent with their hypothesis, results elucidated that children who had a general negative attributional style presented with higher levels of depressive symptoms and trauma-related distress, independent of abuse type (Runyon & Kenny, 2002). Moreover, results indicated that children who had been physically abused had a negative attributional style and reported lower levels of trauma-related distress compared to children who had been sexually abused. Lastly, they found

no significant difference between groups on self-reported depressive symptoms (Runyon & Kenny, 2002).

Likewise, Feiring, Taska, and Lewis (2002) studied how negative attributional style influences maladaptive outcomes following sexual abuse and whether positive changes in attributional style impacts long-term effects of CSA. Their sample consisted of 83 children reporting a history of sexual abuse. There were 61 girls and 22 boys between the ages of 8 and 11 years old. They examined attributional style and self-reported symptoms of distress within eight weeks of disclosure of abuse (before treatment began) and children were reassessed at a 1-year follow up (Feiring, Taska, & Lewis, 2002). Results demonstrated that children who had a negative attributional style reported higher levels of distress. Findings suggested that positive changes in attributional style (having fewer negative attributions) was related to a decrease in self-reported distress (Feiring, Taska, & Lewis, 2002). Thus, when a child reported fewer negative attributions, they reported fewer symptoms.

In a retrospective study, Steel, Sanna, Hammond, Whipple, and Cross (2004) investigated how attributional style mediated the relationship between CSA and outcomes with 85 adults reporting a history of CSA in non-patient, psychiatric outpatient, and psychiatric inpatient settings. Specifically, they examined how negative attributional style mediated the relationship between abuse-related factors (e.g., duration of abuse) and long-term effects of childhood sexual abuse in adults. Evidence from the study suggested that adults with a negative attributional style reporting a history of CSA have a higher likelihood of experiencing psychological distress compared to CSA adult victims without a negative attributional style (Steel et al., 2004). In addition, they found that some abuse-

related characteristics, such as duration and severity of abuse, were related to higher levels of distress only when a negative attributional style was present.

Similarly, Schierholz, Kruger, Barenbrugge, and Ehring (2016) hypothesized that a general negative attributional style would mediate the relationship between child maltreatment and depression. Their sample consisted of 340 adult participants (82.4% women) reporting a history of child maltreatment. Through mediational analyses their findings supported their hypothesis, suggesting that adults who attributed their child abuse experience as internal, stable, and global endorsed more depressive symptoms (Schierholz et al., 2016). Attributional style may be another factor explaining diversity in CSA outcomes.

In contrast to other studies (e.g., Kaufman, 1991; McGee, Wolfe, & Olson, 2001; Toth et al., 2002), Gross and Keller (1992) sampled young adults ($N = 228$) with a history of physical and emotional abuse. The purpose of their study was to examine the relationship between a maladaptive attributional style and long-term negative consequences associated with physical and emotional abuse. There was a total of four different groups: the physically abused group ($n = 21$), the emotionally abused group ($n = 47$), the combined group (physically and emotionally abused; $n = 17$), and the control or non-abused group ($n = 17$). Their results indicated no significant differences between the four groups in respect to attributional style or how they perceived the cause of their abuse. There were no significant differences in attributional style between young adults with and without a history of abuse (Gross & Keller, 1992). These findings highlight that there continue to be inconsistencies about the relationship between a negative attributional style and outcomes following child maltreatment.

Overall, research supports that there is a relationship between general attributional style and externalizing and internalizing outcomes following child maltreatment (Brown & Kolko, 1999; Gold, 1986; Runyon & Kenny, 2002; Steel et al., 2004). The way in which an individual perceives the cause of their abuse experience can impact their functioning. Individuals with a maladaptive attributional style are more likely to present with more severe symptomatology because they likely attribute their negative life events as internal, stable, and global compared to external, unstable, and specific (Brown & Kolko,1999; Brown & Siegel, 1988; Valle & Silvosky, 2002). It may be important for treatment providers to consider children's explanations of their life events, particularly when children are presenting to treatment for behavioral problems with a history of abuse. On the other hand, some research suggests there may be other factors impacting children's outcomes following abuse (e.g., Gross & Keller, 1992). The following section identifies relevant research regarding sexual abuse-related attributions.

Attributions Specific to Child Sexual Abuse

The current study takes a slightly different approach in operationalizing abuse attributions. Instead of focusing on stable, global, and internal attributions, the focus is on sexual abuse specific attributions. Sexual abuse-related attributions are cognitions made specifically about a sexual abuse experience (e.g., self-blame, guilt, dangerous world; Valle & Silovsky, 2002; Wolfe, Gentile, Michienzi, Sas, & Wolfe, 1991). Abuse attributions refer to the way a child places blame for the sexual abuse experience and how they interact with the world around them following the abuse. Attributions about the abuse may serve as an attempt to understand an experience that threatens their sense of safety within the world (Valle & Silovsky, 2002).

Interestingly, abuse attributions can be viewed as either an outcome associated with sexual abuse or as a factor influencing the relationship between sexual abuse and outcomes. The following literature review includes a mixture of studies examining abuse attributions as mediator and moderator variables and research studies investigating abuse attributions as outcome variables following sexual abuse. Compared to research studies regarding general attributional styles, the literature is less populated with studies investigating sexual abuse-specific attributions. Investigating the relationship between sexual abuse-related attributions (e.g., self-blame and guilt, personal vulnerability) and outcomes may provide additional clarity regarding the heterogenous reactions to sexual abuse. Further, understanding how sexual abuse-specific attributions relate to symptom presentation may provide better information for targeting abuse-related attributions in treatment for victims of sexual abuse.

The most specific and thorough measure capturing abuse attributions related to child sexual abuse is the Abuse Attributions scale of the Children's Impact of Traumatic Events Scale – Revised (CITES-R; Wolfe et al., 1991). The Abuse Attributions scale consists of four subscales: Self-Blame and Guilt, Personal Vulnerability, Dangerous World, and Empowerment. The CITES-R has been utilized in studies examining the relationship between CSA and symptomology. Particularly, research has found that children presenting with more negative abuse attributions (e.g., feeling vulnerable, blaming themselves) are more likely to present with symptoms of psychopathology (e.g., anxiety, depression, behavioral problems) compared to children who feel empowered and do not blame themselves (Kolko, Brown, & Berliner, 2002; Yancey et al., 2011). It is important to continue investigating the relationship between abuse-specific attributions

and outcomes following sexual abuse to further understand the role that attributions have on post-abuse functioning.

Attributions of self-blame and guilt. Attributions of self-blame and guilt following child sexual abuse have been extensively researched. Children tend to blame themselves and feel guilty if they make internal attributions. Attributions of self-blame and guilt have been linked to varied outcomes among children who have been sexually abused (Barker-Collo & Read, 2003; Daigneault, Hebert, & Tourigny, 2006). For example, Feiring, Taska, and Chen (2002) utilized a within-groups longitudinal sample consisting of children and adolescents, ages 8 to 15 ($N = 137$), with substantiated cases of sexual abuse. They examined how abuse attributions related to outcome at a 1-year follow up. Participants were initially assessed within eight weeks of the disclosure of CSA and, then again, at a 1-year follow up. Results exemplified that children were at a higher risk for developing depressive symptoms and exhibiting lower self-esteem if they blamed themselves for the sexual abuse and developed feelings of guilt compared to children who did not blame themselves or did not feel guilty about their abuse experience (Feiring, Taska, & Chen, 2002).

Relatedly, another longitudinal study by Feiring and Cleland (2007) investigated the stability of attributions of self-blame over a span of six years. Their sample consisted of 8- to 15-year-olds who had confirmed cases of sexual abuse. They explored how abuse attributions related to symptom development and overall adjustment in the sixth year following disclosure. Feiring and Cleland (2007) suggested that children reporting higher levels of self-blame and guilt reported higher levels of internalizing symptoms. Blaming themselves, feeling guilty, and self-report of internalizing symptoms were

present at the 6-year follow up. These results are important because it illustrates stability in how sexually abused children and adolescents attribute their abuse experience and the world around them. Symptomology is more likely to become stable across time if children blame themselves and feel guilty for their abuse experience, particularly when there is no change in abuse-related attributions (Feiring & Cleland, 2007). This demonstrates the need for intervention at the level of abuse attributions to reduce long-term negative outcomes for children and adolescents with a history of CSA.

Likewise, a retrospective study identified a strong relationship between symptomology and self-blame in adults reporting a history of sexual abuse. Canton-Cortes, Cortes, and Canton (2012) examined the relationship between attributions of self-blame and internalizing symptoms in college-aged students reporting a history of CSA (*N* = 182). The comparison group consisted of the same number of college-aged students without a history of CSA and were matched on a number of factors, including age, number of siblings, and family structure. Results specified that when adult victims of CSA blamed themselves for the abuse that occurred in their childhood, they reported higher levels of internalizing symptoms (Canton-Cortes et al., 2012). Findings are consistent with previous research demonstrating stability of self-blame and guilt attributions in victims of CSA (Feiring & Cleland, 2007; Feiring, Taska, & Lewis, 2002).

Although there have been studies finding a strong relationship between attributions of self-blame and guilt and negative psychological outcomes with children and adults reporting a history of CSA (Celano, Hazzard, Campbell, & Lang, 2002; Daigneault, Hebert, & Tourigny, 2006; Manion et al., 1998), Barker-Collo (2001) found no relationship between abuse attributions and symptomology in adult females reporting

a history of child sexual abuse. It is important to note that participants were asked to describe and report upon attributions they made during their childhood and not currently as an adult. This is a limitation of the study because participants may not have been accurate in their recollection of their abuse attributions due to the passage of time. Nonetheless, findings highlight the variability in how victims of sexual abuse may attribute their abuse experience and how their perceptions of who is to blame relate to symptom presentation (Barker-Collo, 2001). Taken altogether, research outcomes heighten the need for early intervention to target negative cognitions such as maladaptive blaming attributions following disclosure of sexual abuse to ameliorate detrimental short- and long-term effects of CSA.

Attributions of personal vulnerability and dangerous world. Separate from attributions of self-blame and guilt, other attributions related to sexual abuse include personal vulnerability and dangerous world attributions. Attributions of personal vulnerability indicate that victims of CSA may believe another abuse incident will occur in the future and believe sexual abuse happens often to other children (Wolfe et al., 1991). Likewise, dangerous world attributions indicate that victims of CSA may believe the world is unsafe and have difficulty trusting others (Wolfe et al., 1991). There are far less research findings with these types of attributions compared to attributions of self-blame and guilt, potentially due to the fact that attributions of personal vulnerability and dangerous world are specific to the CITES-R measure (Wolfe, 1991). Nonetheless, these abuse attributions are important to investigate because CSA victims are at risk for developing negative outcomes and clinical levels of symptomology when they feel they have no control over situations in their life and believe that the world is unsafe. Child

sexual abuse can disturb children and adolescent's trust and belief in a safe world (Finkelhor, 1994; Valle & Silovsky, 2002).

Feiring, Taska, and Lewis (1999) examined how victims' gender affected the relationship between CSA and abuse attributions related to feeling vulnerable to future maltreatment and lacking trust with people and the world around them. There were 169 participants (ages ranged from 8-years old to 15-years old). Although there was a discrepancy between the number of girls and boys in the study (121 girls and 48 boys), results suggested there were gender differences. Conclusions by Feiring and colleagues (1999) demonstrated that girls were more likely to believe the world was dangerous and feel more vulnerable to future abuse compared to boys following their sexual abuse experience.

On the contrary, Valle and Silovsky (2002) found no consistent relationship between victims' gender and abuse attributions after reviewing the literature on attributions of personal vulnerability and dangerous world following either child physical abuse or sexual abuse. However, part of their review supported the notion that feeling vulnerable and believing the world was unsafe was associated with negative psychological adjustment (e.g., depression, anxiety, PTSD), which continues to signify the importance of intervening at the level of abuse attributions to decrease risk for short- and long-term effects for victims of CSA.

Attributions of empowerment. Within the CSA literature, the construct of empowerment has been scantly researched as an outcome related to sexual abuse or as a factor mediating outcomes of sexual abuse. As noted previously, the CITES-R measure consists of an Attributions Scale which has a subscale labeled Empowerment. This

subscale is intended to capture how children and adolescents perceive their ability to stop future victimization (e.g., "Things like this WILL NOT happen again"; Wolfe et al., 1991), which is framed more positively compared to other attributions reviewed above (e.g., self-blame and guilt).

One study investigated whether the relationship between abuse attributions, including empowerment, related to child outcome (i.e., sexual anxiety) and whether this relationship differed between sexually abused children and non-sexually-abused children (Cohen, Deblinger, Maedel, & Stauffer, 1999). There were 30 children in the sexually abused group and 30 children in the non-abused group who were matched on various demographic variables (e.g., sex, age, family income). Cohen et al. (1999) specifically used the empowerment subscale of the CITES-R to examine the empowerment construct. Interestingly, their results suggested that children who had been sexually abused reported feeling more empowered compared to non-abused children. The authors noted that a potential reason for this counter intuitive finding could be because all children in the abused sample had substantiated cases of sexual abuse (Cohen et al., 1999); therefore, they might feel empowered to stop future abuse because they did something about their sexual abuse experience to stop it from continuing. Yet, non-abused children may not feel like they can stop future abuse because this has never happened to them (Cohen et al., 1999). Lastly, the authors suggested that the "empowerment" label to the subscale may be misleading. Instead of assessing youth's sense of empowerment, the scale might be assessing knowledge about self-protection (Cohen at al., 1999).

Celano, Hazzard, Webb, and McCall (1996) examined the relationship between powerlessness (reverse scored of the Empowerment scale from the CITES-R measure)

and outcomes following CSA. They found that girls (ages 8 to 13) who had disclosed sexual abuse reported feeling powerless to future abuse and believed they would not be able to stop it. In addition to finding a relationship between powerlessness and child outcomes, Celano et al. (1996) examined the efficacy of an experimental program, called the Recovering from Abuse Program (RAP), and the authors investigated how effective the RAP treatment targets feelings of powerlessness. Participants were randomly assigned to either the RAP treatment condition or to the treatment-as-usual (TAU) condition. Celano and colleagues (1996) suggested that attributions of powerlessness are important to further investigate because components of the RAP program demonstrated success in empowering sexually abused children to stop future abuse, alleviating some of the reported symptoms throughout treatment (e.g., less depressive symptoms).

Overall, research has demonstrated a relationship between sexual abuse-specific attributions and adjustment following CSA (Ullman, 2007; Yancey, Hansen, & Naufel, 2011; Zinzow, Seth, Jackson, Niehaus, & Fitzgerald, 2010). Due to diverse responses in sexually abused children, further examining how sexual abuse attributions relate to differing levels of symptomatology will better inform treatment that is focused on addressing maladaptive attributions related to sexual abuse.

Addressing Attributions in Treatment

Research overall has concluded that treatment is effective in reducing short- and long-term negative consequences for most children who have been sexually abused (for reviews, see Benuto & O'Donohue, 2015 and Taylor & Harvey, 2010). Given the purpose and treatment sample of the present study, a brief examination of how treatments may address sexual abuse-related attributions is provided. For more comprehensive

summaries of treatments for child sexual abuse, see reviews by Cary and McMillen (2012) and Cohen, Deblinger, Mannarino, and Areliano (2001).

Children who have been sexually abused are often referred for services following their disclosure of abuse and may present with varied levels of symptomatology at the time of treatment (Saywitz, Mannarino, Berliner, & Cohen, 2000). One of the most widely used and thoroughly researched treatments for children experiencing PTSD and trauma-related symptoms following a traumatic event, including child sexual abuse, is Trauma-Focused Cognitive Behavioral Therapy (TF-CBT; Cohen, Mannarino, & Deblinger, 2006). Core values of TF-CBT include the acronym CRAFTS: Components based, Respectful of cultural values, Adaptable and flexible, Family focused, Therapeutic relationship is central, and Self-efficacy is emphasized. In addition, core components of TF-CBT that are practiced by the child and parent to improve their skills is provided by the acronym PRACTICE: Psychoeducation and Parenting skills, Relaxation, Affective modulation, Cognitive coping and processing, Trauma narrative, *In vivo* mastery of trauma reminders, Conjoint child-parent sessions, and Enhancing future safety and development (Cohen et al., 2006). The parent and child participate in treatment at the same time each week, but each session is conducted separately by a different therapist.

While TF-CBT's focus is not solely on reducing maladaptive attributions related to sexual abuse, such as blaming themselves for their abuse experience, TF-CBT has major components that emphasize and decrease negative abuse-related attributions throughout treatment. In turn, this may contribute to successes in treatment because of the relationship between abuse attributions and symptomology. For example, within the Cognitive Coping component of TF-CBT, children are encouraged to identify inaccurate

thoughts and perceptions, including self-blame and guilt, associated with their abuse experience. Then, clients implement strategies to correct misperceptions and thoughts to be more helpful and productive (Cohen et al., 2006). Another example occurs within the Enhancing Safety and Future Development component of TF-CBT. This component is designed to target feelings of vulnerability and being fearful of their surroundings. In addition, this component of treatment teaches children personal safety skills and helps them to feel more empowered to decrease chances of future revictimization as well as providing them with the skills to do something if abuse occurs (Cohen et al., 2006).

As noted, TF-CBT has been systematically researched and found to be superior to other types of treatment for children with a history of trauma. For example, one study by Cohen, Deblinger, Mannarino, and Steer (2004) investigated the differences in efficacy between TF-CBT and child-centered therapy approaches for treating children who have been sexually abused. Their sample consisted of children between the ages of 8 and 14 years old who were randomly assigned to either the TF-CBT condition or the child-centered therapy condition. Results elucidated that children in the TF-CBT group displayed positive improvements in symptom endorsement compared to children who were in the child-centered therapy group (Cohen et al., 2004). Similarly, other studies have found that children participating in TF-CBT compared to other types of treatment demonstrated significant improvements in symptom reduction (e.g., Berliner & Elliott, 2002; Cohen, Mannarino, Knudsen, 2005; Deblinger et al., 1997).

Further, a study by Cohen and Mannarino (2000) made the argument that addressing sexual abuse-related attributions during treatment is important to decrease children's symptomology because this type of cognitive attribution is associated with

self-reported symptoms of internalizing and externalizing symptoms. Within this study, they were interested in the relationship between negative abuse attributions and treatment outcome with sexually abused children, ages 7- to 14-years old ($N = 49$). Children were randomly assigned to either a sexual abuse specific CBT group or a non-directive and supportive therapy group, and they completed an array of self-report measures assessing symptoms at pre-treatment and post-treatment. Cohen and Mannarino (2000) hypothesized that higher levels of self-blame would be associated with higher levels of self-reported symptoms, and higher levels of self-blame would predict outcome of treatment, independent of treatment group. Findings illustrated that children who blamed themselves for the abuse endorsed higher levels of symptoms (depression and anxiety) at pre-treatment. Results also demonstrated that children in the CBT group had lower levels of self-blame and fewer depressive and anxious symptoms at post-treatment, lending support for targeting sexual abuse attributions during treatment (Cohen & Mannarino, 2000).

A limitation within the CSA treatment literature is that many samples exclude children who are "asymptomatic" or presenting with minimal levels of symptomology. Oellerich (2002) argues that treatment is not helpful for children who are not presenting with clinical levels of symptomatology, but Saywitz et al. (2000) noted that treatment can be beneficial for these children. Although some children may not initially present with clinical level symptoms, one reason why treatment may be beneficial is related to the "sleeper effect" in which symptoms may not manifest until months or years following disclosure of abuse (Mannarino, Cohen, Smith, & Moore-Motily, 1991). Psychoeducation regarding sexual abuse and improving adaptive coping skills has

demonstrated to be helpful for children who may not be currently exhibiting clinical levels of symptomology, in turn, decreasing the probability of long-term detrimental outcomes (Saunders, 2012; Sawyer & Hansen, 2014; Saywitz et al., 2000).

Therefore, a unique aspect of the current study is that the treatment setting includes children with varied levels of symptomatology, including children who are currently not exhibiting or reporting any clinical level symptoms. Project SAFE (Sexual Abuse Family Education) is a research project and clinical service provided to children and adolescents who have disclosed sexual abuse and their non-offending family members. Project SAFE provides a 12-week psychoeducational cognitive-behavioral treatment program located at a Child Advocacy Center (CAC). This treatment program has been shown to effectively decrease self-reported symptomatology and improve self-esteem (Hsu, 2003; Hubel et al., 2014; Sawyer & Hansen, 2014). Separate groups are conducted once per week for 90-minutes simultaneously for the child group, adolescent group, and non-offending caregiver group. Halfway through the 12-week treatment, a non-offending and non-abused sibling group begins for the remaining 6 weeks of treatment.

A few of the unique differences between Project SAFE and TF-CBT is that Project SAFE is held in a group format, is conducted in parallel (i.e., children participate in a separate group from their caregiver at the same time each week), and includes children with all levels of symptomology without focusing solely on those with trauma-related symptoms. Nevertheless, some of the components from Project SAFE that are like TF-CBT include psychoeducation, emotions, coping with emotions, discussion of emotions surrounding the abuse, assertiveness skills training, and prevention.

Similar to traditional TF-CBT, Project SAFE addresses components of sexual abuse-related attributions. For example, in session 5, there is a discussion about self-perceptions following their sexual abuse experience. Some of these self-perceptions and personal attributions may include blaming themselves and feeling guilty for the sexual abuse, and therapists address those negative attributions in session. In sessions 6 and 7, there is more in-depth discussion about blaming and feeling guilty when they discuss their feelings surrounding their sexual abuse experience. During those sessions, children and adolescents sometimes report feeling vulnerable because of the abuse, and therapists address those types of attributions as well. Additionally, the focus of session 10 is on reducing feelings of stigmatization, guilt, and shame surrounding the abuse and enhancing their self-image. Lastly, session 11 addresses feelings of helplessness or lack of empowerment and believing the world is dangerous by introducing assertiveness skills, discussing personal space, giving them the power to say "no", and practicing skills to keep them safe (e.g., do not enter a vehicle unless your parent says it is okay, even if you know the person). During this session, the purpose is to give them a sense of empowerment to know that they can do certain things to keep themselves as safe as possible (e.g., tell a parent where they are, say no, run away and scream, keep telling safe adults if abuse occurs again until they find an adult who believes them and stops it from happening again).

The current sample resides within the context of Project SAFE, which is a unique setting because the treatment program consists of children who may be presenting with subclinical levels of symptomatology, unlike TF-CBT. Given the purpose of the current study, Project SAFE provides a rich context to examine attributions related to sexual

abuse and the relationship between abuse attributions and symptomatology for children who have disclosed sexual abuse.

The Purpose of the Study

Due to heterogeneous outcomes following child sexual abuse, inconsistency within the literature regarding the relationship between attributions specific to child sexual abuse and child outcomes, and the lack of research examining sexual abuse-specific attributions, the current study has three goals. The first goal is to determine subgroups for Project SAFE participants based on patterns of symptom presentation. Subgroups will be formed from youth self-report of symptoms (e.g., depression) as well as parent-report of youth symptoms (e.g., behavioral problems, internalizing symptoms). Identifying subgroups of CSA victims lends to better investigation of differences within each group. While previous Project SAFE research projects have conducted cluster analyses, the current project builds upon those studies (e.g., Sawyer & Hansen, 2014; Yancey, Naufel, & Hansen, 2013). For example, the current study has a much larger sample size compared to prior studies. The study uses different measures to conduct cluster analyses, meaning the sample utilizes a different age grouping compared to previous Project SAFE studies. Further, no other Project SAFE research study has examined specific abuse attributions related to clusters nor investigated the relationship between changes in symptoms and attributional change. Using the identified groups, the second goal is to examine differences between each group on endorsement of abuse attributions (e.g., self-blame/guilt, dangerous world). The final goal of the study is to examine how changes in internalizing and externalizing symptoms associate with

changes in sexual abuse attributions over the course of treatment for each symptom group.

Aim #1: Identify clusters of symptom presentation for sexually abused youth presenting to treatment.

- *Hypothesis*: Based on previous research exclusive to Project SAFE (Sawyer & Hansen, 2014; Sedlar, 2001; Yancey, Naufel, & Hansen, 2013), it is expected that symptom presentation will vary, leading to four different cluster groups: highly distressed (elevations across all measures), problem behavior (elevations with caregiver report of child distress, but not victim self-report), internalizing (elevations with self- and parent-report of internalizing symptoms), and subclinical groups (no elevations on any of the measures).

Aim #2a: Examine the relationship between sexual abuse-specific attributions and cluster membership.

- *Hypothesis:* Based on previous research with a smaller sample size of Project SAFE data (Yancey, Naufel, & Hansen, 2013) and research illustrating a relationship between abuse attributions and symptomology (Valle & Silvosky, 2002; Wolfe, 1991), it is expected that cluster groups will have different profiles of abuse attributions. It is hypothesized that the highly distressed, internalizing, and problem behavior groups (i.e., symptomatic groups) will have greater endorsements of negative abuse attributions, and the subclinical group will have fewer endorsements of negative abuse attributions.

Although it is hypothesized that the symptomatic cluster groups will have greater endorsements of negative abuse attributions compared to the subclinical group, specific hypotheses about differing profiles of abuse attributions between the symptomatic cluster groups were not made.

Aim #2b: Explore the relationship between sexual abuse-specific attributions and cluster membership when controlling for child characteristics, abuse characteristics, and familial characteristics.

- Because the current study is focused on examining attributions about the abuse, multivariate analyses controlled for child characteristic, abuse characteristic, and familial characteristic variables to better investigate how sexual abuse attributions influence outcomes.
- Child characteristics included gender and age of victim. Abuse characteristics included severity of abuse (i.e., penetrative vs. non-penetrative sexual abuse) and victim-perpetrator relationship. Lastly, familial characteristics included family support, family cohesiveness, and family's attitudes and behaviors toward problem-solving in difficult situations.
- Because the clusters were elucidated from aim 1, no specific hypotheses were given.

Aim #3: Examine how changes in symptoms relate to sexual abuse-specific attributional change over the course of treatment for each cluster.

- *Hypothesis:* It is expected that there will be improvement in symptoms as negative sexual abuse attributions decrease at post-treatment, but it is premature to hypothesize differences between the clusters.
- *Hypothesis:* It is expected that there will be no significant differences in symptoms and attributions from post-treatment to the three-month follow-up, demonstrating maintenance of changes from post-treatment.

CHAPTER 2: METHOD

Setting and Participants

Most participants were referred to Project SAFE from the CAC, but some were referred from other community mental health agencies. As noted above, Project SAFE is a 12-week, manualized psychoeducation intervention program which provides cognitive behavioral group treatment for victims of child sexual abuse and their non-offending caregiver(s) and non-offending sibling(s). Typically, the ages range from 7- to 12-years old for the child group and 13- to 18-years old for the adolescent group. However, other factors are considered, including developmental level and caregiver requests (e.g., requesting similar-aged siblings who are both victims to be in the same group) when placing youth in treatment groups. The non-offending caregiver participated in the caregiver treatment group. In addition, another treatment group began half-way through treatment (6-week mid-point) that consisted of the non-abused and non-offending siblings, although data from this group were not used in any of the following analyses.

Groups met weekly for 90-minute sessions. Therapists for Project SAFE were clinical psychology doctoral students at the University of Nebraska-Lincoln, and each group had two or more therapists with at least one Master's level therapist. All therapists were supervised by a licensed clinical psychologist. Previous research has demonstrated that Project SAFE group positively impacts families. Specifically, treatment has been shown to increase self-esteem, decrease maladaptive behaviors (e.g., inappropriate sexual behaviors, risky behaviors), improve negative abuse attributions, and improve overall functioning for both youth and caregivers participating in Project SAFE (e.g., Hansen, Hecht, & Futa, 1998; Sawyer & Hansen, 2014).

The following inclusion criteria had to be met to participate in the study: (a) assessments completed at intake with the family, (b) assessments completed at termination of treatment with the family, (c) the youth was between the ages of 7 and 16 at the time of treatment, and (d) Child Protective Services investigated the allegation of child abuse.

Participants were 153 sexually abused youth and their non-offending caregivers who completed the Project SAFE pre-treatment assessment measures. The current study used archival data from these groups. Although Project SAFE collects data from children 6 to 18 years old, the current study included children and adolescents from ages 7 to 16 years old based on measures used (described below). Victim participants consisted mostly of females (79.1%) and identified as European American (77.8%), their ages ranged between 7-years-old and 16-years-old (M = 11.60, SD = 2.59), and their grade levels ranged from 1st grade to 10th grade. The majority of non-offending caregivers were female (83.0%), identified as European American (81.0%), and were biological parents (85.7%). Non-offending caregivers ranged in age from 23-years old to 72-years old (M = 37.55, SD = 7.94). In cases when there were multiple caregivers or multiple CSA victims in one family, only one non-offending caregiver and one child or adolescent per family were used in the analyses. For example, due to a lower number of males in the sample, when there was a male victim in the family, male participants were chosen for analyses. When there were two caregivers participating in group, the participant listed as the "first" caregiver, which is typically the caregiver that signed consent to treatment and the caregiver who has the most contact with therapists, were included in analyses. Complete

statistics for youth victim demographics are presented in Table 1 and complete statistics for non-offending caregiver demographics are presented in Table 2.

Regarding abuse specific information, the victim-perpetrator relationship was categorized as intrafamilial or extrafamilial. An intrafamilial perpetrator was classified as a family member (i.e., biological, step, or adoptive parents, parent's partner, grandparent, sibling, or other family member). On the other hand, an extrafamilial perpetrator was identified as a non-family member (i.e., adult family friend, babysitter, stranger, coach, teacher). The majority of perpetrators were intrafamilial (60.2%), male (91.5%), and an average age of 29-years old (*SD* = 14.14). Total number of perpetrators were categorized as being sexually abused by one perpetrator or abused by two or more perpetrators, and most youth reported sexual abuse by one perpetrator (80.4%). Severity of abuse was categorized by the type of CSA. Penetrative CSA included anal sex, oral sex, vaginal sex, and digital penetration. Non-penetrative CSA included pornography and fondling. Penetrative CSA was the majority of the sexual abuse experiences (75.2%). Complete statistics for abuse specific information are presented in Table 3.

Table 1

Demographic Information for Youth Victims

Variables	***Frequency (%)***	***M (SD)***
Age		11.60 (2.59)
Gender		
Female	121 (79.1%)	
Male	30 (19.6%)	
Ethnicity		
European American	119 (77.8%)	
Bi-Racial	6 (3.9%)	
Hispanic American	7 (4.6%)	
African American	11 (7.2%)	
Multiracial	4 (2.6%)	
Native American	4 (2.6%)	
Grade Level		
1st Grade	3 (2.0%)	
2nd Grade	14 (9.2%)	
3rd Grade	15 (9.8%)	
4th Grade	18 (11.8%)	
5th Grade	16 (10.5%)	
6th Grade	20 (13.1%)	
7Th Grade	16 (10.5%)	
8th Grade	12 (7.8%)	
9th Grade	15 (9.8%)	
10th Grade	12 (7.8%)	

Table 2

Demographic Information for Non-Offending Caregivers

Variables	***n (%)***	***M (SD)***
Age		37.55 (7.94)
Gender		
Female	127 (83.0%)	
Male	19 (12.4%)	
Ethnicity		
European American	124 (81.0%)	
Hispanic American	9 (5.9%)	
African American	5 (3.3%)	
Bi-Racial	5 (3.3%)	
Native American	2 (1.3%)	
Multiracial	1 (0.7%)	
Relationship to Child		
Biological mother	115 (75.2%)	
Biological father	16 (10.5%)	
Step or adoptive mother	5 (3.3%)	
Step or adoptive father	2 (1.3%)	
Foster mother	2 (1.3%)	
Grandmother	5 (3.3%)	
Legal guardian	1 (0.7%)	

Table 3

Abuse Specific Information for Sexually Abused Youth

Variables	*n (%)*	*M (SD)*
Duration of Abuse (in months)		15.85 (21.33)
Age of Perpetrator		29.45 (14.14)
Total Number of Perpetrators		
1 perpetrator	123 (80.4%)	
2 or more perpetrators	20 (13.2%)	
Child Relationship to Perpetrator		
Intrafamilial	92 (60.2%)	
Extrafamilial	49 (32.0%)	
Gender of Perpetrator		
Male	140 (91.5%)	
Female	3 (2.0%)	
Type of Abuse		
Penetration Abuse	115 (75.2%)	
Non-penetration Abuse	27 (17.6)	
Don't Know	11 (7.2%)	

Measures

Caregiver-Report Measures

Child Behavior Checklist (CBCL**;** Achenbach & Rescorla, 2001). The CBCL has 113-items and 20-items assessing youth behavioral concerns and social competence that is completed by the caregiver to obtain information about the youth's activities, interests, peer relationships, and school functioning. It is designed for children between the ages of 4- and 18-years old. Analyses used the Internalizing and Externalizing Scale scores, which are the behavioral problem items. *T*-scores between 67 and 69 are considered borderline clinical and *T*-scores of 70 or higher are considered clinically

significant. The measure has demonstrated good reliability (Achenbach & Rescorla, 2001). For the present sample, both scales had good reliability.

Child History Form (CHF). The CHF, designed for Project SAFE, is a questionnaire to collect information regarding abuse relevant information. There are numerous abuse characteristics presented on the form (e.g., age at onset, relationship to perpetrator). The current study used the following variables for analyses: relationship to perpetrator, severity of sexual abuse, and frequency of the abuse.

Demographic Questionnaire. The Demographic Questionnaire was developed by Project SAFE to collect information about the family. Information about the caregivers include age, ethnicity, family income, marital status, employment status, and educational achievement. Information about the victims include age, gender, ethnicity, current school and grade. For the current study, the victim's age and gender were used in analyses.

Family Adaptability and Cohesion Evaluation Scale-IV (FACES-IV; Olson, 2011). The FACES-IV is a 62-item self-report measure assessing family cohesion, adaptability, and satisfaction. Participants answered items on a 5-point Likert-type scale (1 = *strongly disagree* to 5 = *strongly agree*). Overall, internal consistency has been shown to be good for all scales (Olson, 2011). Reliability for the current sample ranged from good to acceptable: Enmeshed (a = .75), Disengaged (a = .88), Balanced Cohesion (a = .87), Chaotic (a = .88), Balanced Flexibility (a = .85), and Rigid (a = .84).

Family Crisis Oriented Personal Evaluation Scales (F-COPES; McCubbin, Larsen, & Olson, 1982). The F-COPES is a self-report measure that consists of 30-items identifying how a family problem-solves and uses other behavioral strategies during

arduous times. Caregivers answered items on a Likert-type scale from 1 to 5 (1 = *strongly disagree* to 5 = *strongly agree*). The five domains of inquiry include: acquiring social support, reframing, seeking spiritual support, mobilizing to acquire and accept help, and passive appraisal. The scores from the five areas are added for a total score, which was used in the present study. Higher scores on the total score indicates the family reports effectively problem-solving and using other strategies to respond in difficult situations. The F-COPES has an acceptable/good range of internal consistency (a = .77 to .86) with individual subscales ranging from questionable (a = .63) to good (a = .83; McCubbin et al., 1982). For the present study, the reliability was acceptable (a = .71) for the overall scale.

Child-Report Measures

Children's Depression Inventory-2 (CDI-2; Kovacs, 2011). The CDI-2 is a 28-item self-reported depressive symptom inventory used for children between the ages of 7 and 17 years old. The CDI-2 measures symptoms of depression within a two-week timeframe, and has two main scales (Emotional Problems and Functional Problems), with four subscales (Negative Mood/Physical Symptoms, Negative Self-Esteem, Interpersonal Problems, and Ineffectiveness). The CDI-2 main scales and subscales appear to have good internal consistency (a = .67 to .91; Kovacs, 2011). For the present sample, internal consistency for the total score was good (a = .89).

Over the years, the original CDI (Kovacs, 1992) underwent revisions and updates, and now the CDI-2 (Kovacs, 2011) is the most updated version to assess for depression symptoms. The CDI-2 made several refinements but there were no major changes to the items or scales. The CDI-2 expanded and updated their norms to be more representative

of the 7 to 17-year-old population of the United States, but there is considerable overlap between the CDI and CDI-2 (Kovacs, 2011). Therefore, a *t*-score for the overall depression score was used, which was attained from the original CDI and the CDI-2 measures. Generally, a *t*-score of 65 or higher is considered clinically significant.

Children's Impact of Traumatic Events Scale-Revised (CITES-R; Wolfe, Gentile, Michienzi, Sas, & Wolfe, 1991). The CITES-R is a questionnaire that measures the effects of CSA from the victim's perspective, such as thoughts and emotions about what happened. It is designed for children ages 8 to 16 years old. The measure contains 78 items, 4 scales, and 11 subscales. The four scales include Posttraumatic Stress, Abuse Attributions, Social Reactions, and Eroticism. Chaffin and Schultz (2001) examined psychometric properties of the CITES-R measure and found that average internal consistencies for the scales were .69, with alphas ranging from .56 to .79. Construct validity of the main scales for the CITES-R was supported, but the individual subscales were more variable, indicating caution when interpreting some of the subscales, such as Dangerous World and Empowerment (Chaffin & Schultz, 2001).

The current study used the 26-item PTSD scale (a = .80) and the 33-item Abuse Attributions scale (a = .83), including the four subscales: self-blame and guilt (a = .80), personal vulnerability (a = .53), dangerous world (a = .50), and empowerment (a = .82). Personal vulnerability and dangerous world subscales had poor internal consistency for the present sample. All other scales and subscales had acceptable to good reliability.

Revised Children's Manifest Anxiety Scale-2 (RCMAS-2*;* Reynolds & Richmond, 1985). The RCMAS-2 is a 37-item self-report measure assessing general anxiety in youth (ages 6- to 19-years old). The measure contains three specific anxiety-

related subscale scores: Physiological, Worry/Oversensitivity, and Social Concerns/Concentration. These subscales combine to yield a Total Anxiety Score, which is based on 28-items. The Total Anxiety Score was used for the current study's analyses. The other 9-items pertain to the Lie scale, which assesses defensive responding. Analyses have indicated reliability coefficients of .83 (Reynolds & Richmond, 1985). The CMAS-R's internal consistency in the present sample was excellent (a = .96).

Procedure

Families were contacted by the Project SAFE Clinical Coordinator for a brief phone screening to gather more information about the family's needs for services and to set up an intake completed at the CAC. Families were provided with informed consent, including confidentiality, limits to confidentiality, the purpose of Project SAFE, and options for treatment. Then, they were asked to complete a battery of assessments. Non-offending caregivers gave consent for both themselves and their child. Youth provided assent.

Participants completed various assessment measures at pre-treatment, at six-weeks, at completion of treatment, and at a three-month follow-up. The battery included both self-report and caregiver-report measures designed to assess youth's presenting symptoms following sexual abuse, symptoms caregivers may also be experiencing (e.g., depression, anxiety), and caregivers' expectations about their child's current and future functioning. The current study used archival data from these time-points obtained through database records for Project SAFE. Data were pulled and entered into a separate SPSS database, and all participants were assigned a unique number and no identifying information was included.

CHAPTER 3: RESULTS

Aim 1: Identify clusters of symptom presentation for sexually abused youth presenting to treatment.

A hierarchical cluster analysis was conducted to identify groups of participants with similar symptom presentation. Pre-treatment child and adolescent self-report measures (i.e., CDI-2, R-CMAS-2, and the PTSD subscale from the CITES-R) and pre-treatment non-offending caregiver measures (i.e., CBCL Internalizing and Externalizing Scales) were used to determine different symptom presentations for CSA victims presenting to treatment. Before conducting the cluster analysis, all scores were converted to Z-scores ($M = 0.0$, $SD = 1$). Z-scores converted all of the raw scores to the same standard scale.

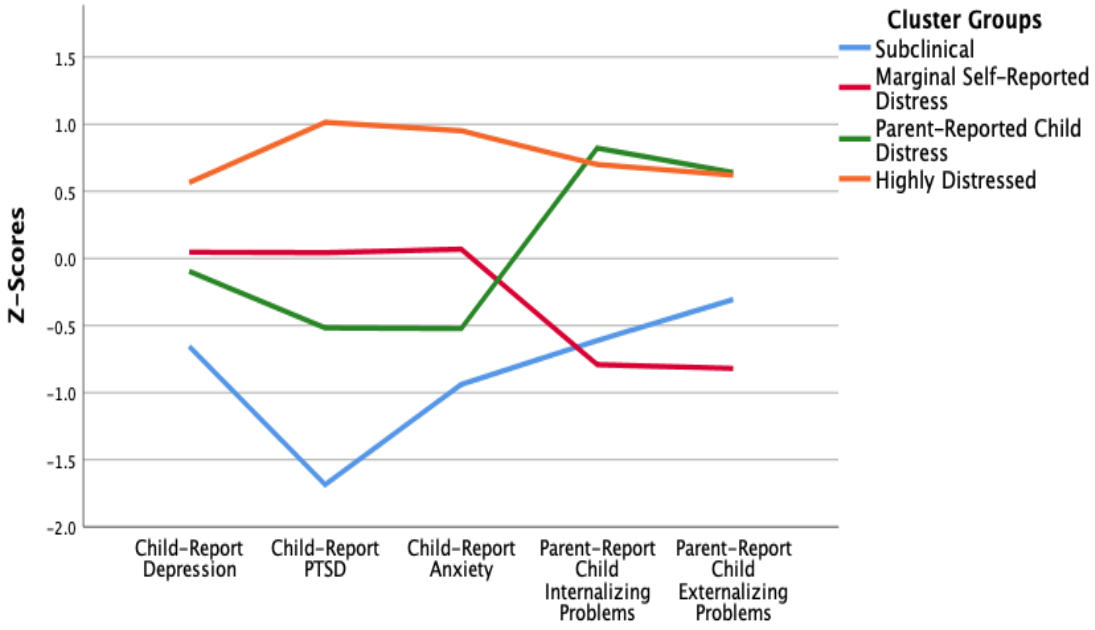
The cluster analysis was created by using the Ward's Method and Squared Euclidean Differences. These methods were used to interpret the data and discover meaningful profiles based on self-report and parent-report of child symptomatology. This type of cluster analysis differs from other classification analyses because cluster groups are generated by grouping individuals with alike scores on measures when group membership is unknown (Aldenderfer & Blashfield, 1984). Ward's Method was used because it minimizes within cluster variance and produces more clusters, each with lower variability (Aldenderfer & Blashfield, 1984). An examination of the agglomeration schedule was used to evaluate coefficient value changes, which guided the decision for choosing how many clusters to keep because there are no agreed-upon criteria for deciding how many clusters to maintain. Thus, the percentage change between coefficients from one stage of clusters to the next was examined to determine the "best

fit" and to identify appropriate number of clusters. The within-cluster variability was less than 11% prior to the stage in which five clusters were combined to form four clusters. The within-cluster variability for reducing to four clusters into three clusters resulted in a 20% increase. These percentage changes suggest four clusters are best fit.

Figure 1 presents the clinical profiles created by the cluster analysis based on the mean z-scores of youth and non-offending caregiver self-report measures. The first cluster was labeled "Subclinical" and consisted of 19 (12.4%) children and adolescents. This cluster of CSA youth had scores below the mean on all self-report and parent-report measures. *T*-score means for each of the measures used to create this cluster group (e.g., CDI-2) fell below 65 (i.e., *T*-scores of 65 and above are commonly used as an indicator of clinically significant symptoms). The second cluster was labeled "Marginal Self-Reported Distress" and consisted of 62 (40.5%) children and adolescents. CSA youth in this cluster had slightly elevated scores on self-reported anxiety symptoms, PTSD symptoms, and depression symptoms (i.e., RCMAS-2, CITES-R PTSD, and CDI-2) and scores below the mean on non-offending parent-report measures (i.e., CBCL Internalizing and CBCL Externalizing). For this cluster, mean *t*-scores on the RCMAS-2 and CDI-2 were slightly above 65, while the CBCL Internalizing and CBCL Externalizing scores were below 65. The third cluster was labeled "Parent-Reported Child Distress" and consisted of 41 (26.8%) children and adolescents. This cluster identified CSA youth who had elevated scores on parent-report measures (i.e., CBCL Internalizing and CBCL Externalizing) and scores below the mean on all self-report measures (i.e., CDI-2, RCMAS-2, and CITES-R PTSD). *T*-score means were below 65 for the CDI-2 and RCMAS-2 measures and above 65 for the CBCL Internalizing and

Externalizing scales. The fourth and final cluster was labeled "Highly Distressed" and consisted of 31 (20.3%) children and adolescents. CSA youth in this cluster had elevated scores on all self-report and parent-report measures. *T*-scores were above 65 for each of the measures.

Figure 1. Cluster Membership Based on Symptoms



A Linear Discriminant Function analysis was conducted to examine the difference between clusters. Z-scores of the five measures were used (i.e., CDI-2, RCMAS-2, CITES-R PTSD, CBCL Internalizing, CBCL Externalizing). Discriminant analyses revealed a significant difference between the clusters and accounted for 67.9% of the variance, $\lambda = .114$, $X^2(15) = 320.440$, $p < .001$, R^2 - canonical = .855. When the first function was removed from the equation, the combined second and third function significantly discriminated the clusters and accounted for 30.7% of the variance, $\lambda = .425$,

$X^2(8) = 126.284$, $p < .001$, R^2 - canonical = .743. However, following the removal of the second discriminant function, the third was not significant, but approached significance, accounting for 1.3% of the variance, $\lambda = .949$, $X^2(3) = 7.662$, $p = .054$, R^2 - canonical = .225. Despite the third function not reaching significance, four clusters were kept due to the agglomeration schedule, review of prior studies using smaller sample sizes of Project SAFE participants, and an analysis of the literature. The overall correct classification rate was 90.8% indicating the measures discriminated each of the groups reliably and accurately (see Table 4). Refer to Table 5 for a summary of the group centroid means for functions 1 and 2, exhibiting separation among the four groups.

Table 4

Classification of Cluster Membership

Original Cluster Membership	Predicted Cluster Membership			
	Cluster 1 Subclinical	Cluster 2 Marginal Self-Reported Distress	Cluster 3 Parent-Reported Child Distress	Cluster 4 Highly Distressed
Subclinical (*n* = 19)	18 (94.7%)	1 (5.3%)	0 (0.0%)	0 (0.0%)
Marginal Self-Reported Distress (*n* = 62)	3 (4.8%)	54 (87.1%)	2 (3.2%)	3 (4.8%)
Parent-Reported Child Distress (*n* = 41)	2 (4.9%)	0 (0.0%)	37 (90.2%)	2 (4.9%)
Highly Distressed (*n* = 31)	0 (0.0%)	0 (0.0%)	1 (3.2%)	30 (96.8%)

Note: 90.8% of cases reclassified correctly

Table 5

Group Centroids for Clusters

Cluster	Function 1	Function 2
Subclinical	-2.899	.707
Marginal Self-Reported Distress	-.573	-1.141

Parent-Reported Child Distress	.169	1.507
Highly Distressed	2.698	-.144

To further examine mean differences between clusters regarding each of the functions based on group centroids, follow-up Analyses of Variance (ANOVA) with pairwise comparisons using LSD minimum mean differences were conducted (see Table 6). Overall, results demonstrated significant differences between all four clusters for both of the functions.

Table 6

Summary of Mean Differences Between Clusters for Each Function Based on Group Centroids

		Cluster 1 Subclinical	Cluster 2 Marginal Self-Reported Distress	Cluster 3 Parent-Reported Child Distress	Cluster 4 Highly Distressed	
Function	Cluster	*Mean Differences*	*Mean Differences*	*Mean Differences*	*Mean Differences*	*F (3, 152)*
One						135.572*
	1	-				
	2	2.33*	-			
	3	3.07*	0.74*	-		
	4	5.60*	3.27*	2.53*	-	
Two						61.336*
	1	-				
	2	1.85*	-			
	3	0.80*	2.65*	-		
	4	0.85*	1.00*	1.65*	-	

Note: * indicates significance $p < .001$

Aim 2a: Examine the relationship between abuse attributions and cluster membership.

A series of Analyses of Variance (ANOVAs) were used to examine the relationship between abuse attributions and group membership. The pre-treatment data from the Abuse Attributions scale of the CITES-R was utilized in this analysis. The Abuse Attributions scale has four subscales: self-blame and guilt, personal vulnerability, dangerous world, and empowerment. Therefore, five total ANOVAs were conducted to examine the relationship between group membership and 1) overall abuse attributions, 2) self-blame and guilt attributions, 3) personal vulnerability attributions, 4) dangerous world attributions, and 5) empowerment attributions. The ANOVAs identified whether there were overall significant differences between clusters based on pre-treatment abuse attributions. Refer to Tables 7 through 11 for the summary of scores for the CITES-R Attributional Scale and subscales for each cluster.

For the overall Attributional Scale, findings indicated significant mean differences among the four cluster groups, $F(3, 148) = 15.74$, $MSE = 60.40$, $p < 0.001$. LSD pairwise comparisons revealed that participants in the Highly Distressed group had significantly higher scores compared to all other groups, demonstrating more negative abuse attributions. The Subclinical group had the lowest mean score, suggesting significantly fewer negative attributions compared to all other groups. Interestingly, there were no significant differences between the Parent-Reported Child Distress group and Marginal Self-Reported Distress group on overall attributions.

For the CITES-R Self-Blame/Guilt subscale, findings indicated significant mean differences among the four cluster groups, $F(3, 149) = 8.19$, $MSE = 18.48$, $p < 0.001$. LSD pairwise comparisons revealed that while participants in the Highly Distressed group had the highest mean score, there were no significant differences between this group and the Marginal Self-Reported Distress group on attributions of self-blame and guilt. There were no significant differences on attributions of self-blame and guilt between the Marginal Self-Reported Distress group and the Parent-Reported Child Distress group. The Subclinical group had significantly fewer attributions of self-blame and guilt compared to all other groups.

For the CITES-R Personal Vulnerability subscale, findings indicated significant mean differences among the four cluster groups, $F(3, 149) = 14.31$, $MSE = 6.75$, $p < 0.001$. LSD pairwise comparisons revealed that participants in the Highly Distressed group had significantly higher scores, indicating more attributions of personal vulnerability compared to all other groups. As predicted, participants in the Subclinical group had the fewest personal vulnerability attributions. Interestingly, participants in the Parent-Reported Child Distress and Marginal Self-Reported Distress groups did not significantly differ regarding personal vulnerability.

For the CITES-R Dangerous World subscale, findings indicated significant mean differences among the four cluster groups, $F(3, 149) = 10.07$, $MSE = 4.00$, $p < 0.001$. LSD pairwise comparisons revealed that participants in the Highly Distressed group had significantly higher scores, indicating more dangerous world attributions compared to all other groups. The Subclinical group had significantly fewer dangerous world attributions compared to all other groups. There were no significant mean differences on dangerous

world attributions between the Marginal Self-Reported Distress group and the Parent-Reported Child Distress group.

Lastly, for the CITES-R Empowerment subscale, findings indicated there were no significant mean differences among the four cluster groups, $F(3, 148) = 1.55$, $MSE = 9.56$, $p = 0.922$.

Table 7

CITES-R Attributional Scale Scores by Cluster Membership

	Mean	*SD*	
Subclinical	12.58[a]	6.28	
Marginal Self-Reported Distress	22.31[b]	7.95	
Parent-Reported Child Distress	20.65[b]	8.49	
Highly Distressed	27.94[c]	7.21	
	df	*F*	*p*
CITES-R Attributional Scale	3	15.74**	.000

** $p < .01$.

Note. Higher scores indicate more negative attributions endorsed. Means with different superscript letters indicate significant differences ($p < .05$).

Table 8

CITES-R Self-Blame/Guilt Subscale Scores by Cluster Membership

	Mean	SD	
Subclinical	2.05[a]	1.99	
Marginal Self-Reported Distress	6.27[bc]	4.65	
Parent-Reported Child Distress	4.98[b]	4.58	
Highly Distressed	7.97[c]	4.18	
	df	*F*	*p*
CITES-R Self-Blame/Guilt	3	8.19**	.000

** $p < .01$.

Note. Higher scores indicate more self-blame/guilt attributions endorsed. Means with different superscript letters indicate significant differences ($p < .05$).

Table 9

CITES-R Personal Vulnerability Subscale Scores by Cluster Membership

	Mean	*SD*	
Subclinical	4.00[a]	2.16	
Marginal Self-Reported Distress	6.60[b]	2.79	
Parent-Reported Child Distress	6.37[b]	2.65	
Highly Distressed	8.87[c]	2.35	
	df	*F*	*p*
CITES-R Personal Vulnerability	3	14.306**	.000

** $p < .01$.

Note. Higher scores indicate more personal vulnerability attributions endorsed. Means with different superscript letters indicate significant differences ($p < .05$).

Table 10

CITES-R Dangerous World Subscale Scores by Cluster Membership

	Mean	*SD*	
Subclinical	4.26[a]	2.02	
Marginal Self-Reported Distress	6.06[b]	2.04	
Parent-Reported Child Distress	5.71[b]	2.19	
Highly Distressed	7.39[c]	1.59	
	df	*F*	*p*
CITES-R Dangerous World	3	10.071**	.000

** $p < .01$.

Note. Higher scores indicate more dangerous world attributions endorsed. Means with different superscript letters indicate significant differences ($p < .05$).

Table 11

CITES-R Empowerment Subscale Scores by Cluster Membership

	Mean	*SD*	
Subclinical	3.11	3.23	
Marginal Self-Reported Distress	3.37	2.77	
Parent-Reported Child Distress	3.40	3.54	
Highly Distressed	3.71	3.01	
	df	*F*	*p*
CITES-R Empowerment	3	.162	.922

Note. Higher scores indicate more personal vulnerability attributions endorsed.

Aim 2b: Explore the relationship between abuse attributions and cluster membership when controlling for child characteristics, abuse characteristics, and familial characteristics.

A series of General Linear Models (GLMs) were utilized to investigate the relationship between abuse attributions and cluster membership (explicated by aim 1) while controlling for child characteristics, such as victim age and gender, abuse characteristics (i.e., sexual abuse severity, victim-perpetrator relationship), and familial characteristics (i.e., family cohesiveness, family's attitudes and behaviors toward problem-solving in difficult situations). Bivariate correlations between all predictors in the model were examined and did not exceed .70, thus ruling out issues with multicollinearity. All data used were from pre-treatment measures (see Tables 12 through 16 for the summary of main effects for attributions).

The first model examined the association between overall abuse attributions and cluster membership while controlling for child age, child gender, CSA severity, victim-perpetrator relationship, family cohesiveness, and family's attitudes/behaviors toward problem-solving in difficult situations. Overall, the model was significant, $R^2 = .284$, $F(9, 130) = 5.733$, $p < .001$, MSe = 54.015. There was a main effect for cluster membership, $F(3, 130) = 12.567$, $p < .001$, MSe = 54.015 with all the other variables held constant at zero. There were no other main effects in the model. None of the covariate factors had significant effects within the model. Pairwise comparisons revealed that participants in the Subclinical group ($M = 13.38$) had the fewest overall attributions while

the Highly Distressed group ($M = 27.86$) had the most overall attributions. All groups were significantly different, except there were no significant mean differences between the Marginal Self-Reported Distress group ($M = 21.92$) and Parent-Reported Child Distress group ($M = 20.25$).

The second model examined the association between self-blame and guilt attributions and cluster membership while controlling for the aforementioned covariate factors (e.g., child gender). Overall, the model was significant, $R^2 = .206$, $F(9, 130) = 3.740$, $p < .001$, MSe = 15.596. There was a main effect for cluster membership, $F(3, 130) = 7.198$, $p < .001$, MSe = 15.596 with all the other variables being held constant at zero. Pairwise comparisons revealed that the Subclinical group ($M = 2.03$) had the fewest self-blame/guilt attributions and the Highly Distressed group ($M = 7.71$) had the most. However, the means were not significantly different between the Marginal Self-Reported Distress group ($M = 6.05$) and both the Parent-Reported Child Distress ($M = 4.81$) and Highly Distressed groups, demonstrating no difference in self-blame/guilt attributions between these groups. Additionally, there was a significant main effect for family's attitudes/behaviors toward problem-solving, $F(1, 130) = 9.407$, $p < .001$, MSe = 15.596. None of the other covariate factors had significant effects within the model.

The third model examined the association between personal vulnerability attributions and cluster membership while controlling for the covariate factors. Overall, the model was significant, $R^2 = .254$, $F(9, 130) = 4.930$, $p < .001$, MSe = 6.678. There was a main effect for cluster membership, $F(3, 130) = 10.401$, $p < .001$, MSe = 6.678 with all the other variables held constant at zero. Pairwise comparisons revealed that the Subclinical group ($M = 4.28$) had the fewest personal vulnerability attributions and the

Highly Distressed group (M = 8.91) had the most. All groups were significantly different except for the Marginal Self-Reported Distress group (M = 6.44) and the Parent-Reported Child Distress group (M = 6.47). Additionally, there was a main effect for child-perpetrator relationship, $F(1, 130) = 3.915$, $p = .05$, MSe = 6.678. None of the other covariate factors had significant effects within the model.

The fourth model examined the association between dangerous world attributions and cluster membership while controlling for covariate factors. Overall, the model was significant, $R^2 = .238$, $F(9, 130) = 4.523$, $p < .001$, MSe = 3.883. There was a main effect for cluster membership, $F(3, 130) = 10.401$, $p < .001$, MSe = 3.883 with all the other variables held constant at zero. Pairwise comparisons revealed that the Subclinical group (M = 4.51) had the fewest attributions and the Highly Distressed group (M = 7.28) had the most. All groups were significantly different with the exception of the Parent-Reported Child Distress group (M = 5.62), which was not significantly different from either the Subclinical group or the Marginal Self-Reported Distress group (M = 6.15). Further, there was a main effect for child-perpetrator relationship, $F(1, 130) = 7.85$, $p < .05$, MSe = 3.883. None of the other covariate factors had significant effects within the model.

The fifth model examined the association between attributions of empowerment and cluster membership while controlling for covariate factors. Overall, the model was not significant, $R^2 = .035$, $F(9, 130) = .531$, $p = .850$, MSe = 9.093.

Table 12

Main Effects for Overall Attributions

Variables	*F*	*p*
Cluster Groups	12.567	.000
Child Age	0.128	.721
Child Gender	0.335	.564
Child-Perpetrator Relationship	3.247	.074
CSA Severity	1.483	.226
Family's Problem-Solving Behaviors	3.733	.056
Family Cohesiveness	0.613	.435
Overall Model	5.733	.000
$R^2 = .284$	*MSe* = 54.015	

Table 13

Main Effects for Self-Blame/Guilt Attributions

Variables	*F*	*p*
Cluster Groups	7.198	.000
Child Age	0.033	.856
Child Gender	0.117	.733
Child-Perpetrator Relationship	0.965	.328
CSA Severity	0.766	.383
Family's Problem-Solving Behaviors	9.407	.003
Family Cohesiveness	1.250	.266
Overall Model	3.740	.000
$R^2 = .206$	*MSe* = 15.596	

Table 14

Main Effects for Personal Vulnerability Attributions

Variables	*F*	*p*
Cluster Groups	10.401	.000
Child Age	0.589	.444
Child Gender	0.127	.722
Child-Perpetrator Relationship	3.915	.050
CSA Severity	1.131	.289
Family's Problem-Solving Behaviors	0.164	.686
Family Cohesiveness	0.011	.917
Overall Model	4.930	.000
$R^2 = .254$	$MSe = 6.678$	

Table 15

Main Effects for Dangerous World Attributions

Variables	*F*	*p*
Cluster Groups	6.790	.000
Child Age	0.358	.551
Child Gender	0.216	.643
Child-Perpetrator Relationship	7.854	.006
CSA Severity	0.010	.920
Family's Problem-Solving Behaviors	0.083	.774
Family Cohesiveness	1.713	.193
Overall Model	4.523	.000
$R^2 = .238$	$MSe = 3.883$	

Table 16

Main Effects for Empowerment Attributions

Variables	*F*	*p*
Cluster Groups	0.686	.562
Child Age	0.160	.690
Child Gender	0.119	.731
Child-Perpetrator Relationship	0.203	.653
CSA Severity	1.003	.318
Family's Problem-Solving Behaviors	0.741	.391
Family Cohesiveness	0.232	.631
Overall Model	0.531	.850
$R^2 = .035$ $MSe = 9.093$		

Aim 3: Examine how changes in symptoms relate to attributional change over the course of treatment.

This aim examined changes in symptoms and changes in attributions from pre-treatment to post-treatment as well as from post-treatment to three-month follow-up. The reason for examining post-treatment to three-month follow-up changes was to investigate stability of changes reported at post-treatment. Pearson's Product-Moment correlations were conducted to explore the relationship between symptom changes and attributional changes at differing time points. These analyses were conducted for each of the cluster groups and for the complete sample.

An "overall symptom score" was created for each time point (i.e., pre-treatment, post-treatment, and three-month follow-up) by averaging each individual symptom score

(e.g., CDI-2, RCMAS-2) from the respective time-point. These composite scores were used instead of individual symptom scores because there was considerable symptom overlap for depression, anxiety, PTSD, and parent-reported child internalizing and externalizing symptoms. Change scores were created to examine differences in scores from pre-treatment to post-treatment and from post-treatment to three-month follow-up for the overall symptom scores and for abuse attributions. Change scores were created by subtracting participants' pre-treatment scores from post-treatment scores. Similarly, change scores were also created by subtracting post-treatment scores from follow-up scores. Paired samples *t*-tests were used to examine whether individual symptoms and attributions improved, worsened, or maintained from pre-treatment to post-treatment and from post-treatment to three-month follow-up for the complete sample as well as for each cluster group.

It was hypothesized that as negative attributions improved, there would be greater reductions in overall symptoms at post-treatment. In addition, it was hypothesized that there would be no significant differences in symptoms and attributions from post-treatment to the three-month follow-up, demonstrating stability in post-treatment outcomes. There were no hypotheses for specific differences between clusters.

Pre-treatment to post-treatment changes in symptoms and changes in attributions. Paired samples *t*-tests were conducted to better understand what changes occurred in symptoms and attributions from pre-treatment to post-treatment. For the Subclinical group ($n = 7$), participants reported significant symptom improvement on self-reported depression. There was no significant improvement on attributions.

Interestingly, attributions of personal vulnerability appeared to have worsened from pre- to post-treatment (see Tables 17 and 18).

Table 17

Summary of Pre- and Post-Treatment Symptom Variables for Subclinical Cluster

Variable	*N*	*M*	*SD*	*t*(*df*)
Pre – CDI Total Score	7	45.71	8.38	-2.76(6)*
Post – CDI Total Score		37.43	2.51	
Pre – RCMAS-2 Total Score	7	48.43	9.09	-0.27(6)
Post – RCMAS-2 Total Score		47.29	11.67	
Pre – CITES-R PTSD Scale	7	14.43	5.13	-0.06(6)
Post – CITES-R PTSD Scale		14.29	6.47	
Pre – CBCL Externalizing Scale	7	57.43	5.59	-0.83(6)
Post – CBCL Externalizing Scale		55.57	8.89	
Pre – CBCL Internalizing Scale	7	52.00	9.42	0.47(6)
Post – CBCL Internalizing Scale		53.43	10.94	

*$p < .05$

Table 18

Summary of Pre- and Post-Treatment Attribution Variables for Subclinical Cluster

Variable	*N*	*M*	*SD*	*t*(*df*)
Pre – CITES-R Overall Attribution	7	11.20	6.02	0.18(6)
Post – CITES-R Overall Attribution		11.50	3.81	
Pre – CITES-R Self-Blame/Guilt	7	2.10	2.38	-1.08(6)
Post – CITES-R Self-Blame/Guilt		1.30	1.34	
Pre – CITES-R Personal Vulnerability	7	3.60	1.58	2.59(6)*
Post – CITES-R Personal Vulnerability		4.50	1.72	
Pre – CITES-R Dangerous World	7	3.90	1.29	-0.34(6)

Post – CITES-R Dangerous World		3.70	1.83	
Pre – CITES-R Empowerment	7	3.20	3.83	-0.97(6)
Post – CITES-R Empowerment		2.00	1.63	

*$p < .05$

For the Marginal Self-Reported Distress group ($n = 38$), participants reported significant improvement on depression and PTSD symptoms. Regarding attributional change, there were significant mean differences for overall attributions, attributions of self-blame and guilt, and attributions of empowerment (see Tables 19 and 20).

Table 19

Summary of Pre- and Post-Treatment Symptom Variables for Marginal Self-Reported Distress Cluster

Variable	*N*	*M*	*SD*	*t*(*df*)
Pre – CDI Total Score	38	54.55	14.32	-3.23(37)*
Post – CDI Total Score		47.34	14.60	
Pre – RCMAS-2 Total Score	38	57.95	12.52	-1.68(37)
Post – RCMAS-2 Total Score		54.58	13.02	
Pre – CITES-R PTSD Scale	38	28.89	6.43	-3.25(37)*
Post – CITES-R PTSD Scale		24.24	8.32	
Pre – CBCL Externalizing Scale	38	50.68	10.47	0.23(37)
Post – CBCL Externalizing Scale		51.00	8.79	
Pre – CBCL Internalizing Scale	38	52.74	9.32	-0.31(37)
Post – CBCL Internalizing Scale		52.26	10.43	

*$p < .05$

Table 20

Summary of Pre- and Post-Treatment Attribution Variables for Marginal Self-Reported Distress Cluster

Variable	*N*	*M*	*SD*	*t*(*df*)
Pre – CITES-R Overall Attribution	38	21.76	7.92	-2.64(37)*
Post – CITES-R Overall Attribution		18.96	6.49	
Pre – CITES-R Self-Blame/Guilt	38	5.78	4.56	-2.53(37)*
Post – CITES-R Self-Blame/Guilt		4.04	3.79	
Pre – CITES-R Personal Vulnerability	38	6.78	2.94	-0.63(37)
Post – CITES-R Personal Vulnerability		6.53	2.79	
Pre – CITES-R Dangerous World	38	5.93	2.15	1.07(37)
Post – CITES-R Dangerous World		6.27	1.68	
Pre – CITES-R Empowerment	38	3.27	2.62	-3.05(37)*
Post – CITES-R Empowerment		1.98	2.16	

*$p < .05$

For the Parent-Reported Child Distress cluster ($n = 17$), participants reported significant symptom improvement for depression and parent-reported child behavior problems. However, there were no significant improvements on any of the attributions (see Tables 21 and 22).

Table 21

Summary of Pre- and Post-Treatment Symptom Variables for the Parent-Reported Child Distress Cluster

Variable	*N*	*M*	*SD*	*t*(*df*)
Pre – CDI Total Score	17	53.06	8.56	-2.21(16)*
Post – CDI Total Score		48.29	8.69	
Pre – RCMAS-2 Total Score	17	46.71	15.38	1.29(16)
Post – RCMAS-2 Total Score		51.24	9.64	
Pre – CITES-R PTSD Scale	17	21.47	5.26	-1.79(16)
Post – CITES-R PTSD Scale		17.88	9.31	
Pre – CBCL Externalizing Scale	17	66.88	7.36	-3.19(16)*
Post – CBCL Externalizing Scale		60.88	11.82	
Pre – CBCL Internalizing Scale	17	69.12	8.65	-2.89(16)*
Post – CBCL Internalizing Scale		62.47	9.20	

*$p < .05$

Table 22

Summary of Pre- and Post-Treatment Attribution Variables for the Parent-Reported Child Distress Cluster

Variable	*N*	*M*	*SD*	*t*(*df*)
Pre – CITES-R Overall Attribution	17	19.47	10.32	-1.19(16)
Post – CITES-R Overall Attribution		16.63	3.59	
Pre – CITES-R Self-Blame/Guilt	17	4.16	5.05	-1.34(16)
Post – CITES-R Self-Blame/Guilt		2.58	1.92	
Pre – CITES-R Personal Vulnerability	17	6.21	2.59	-0.61(16)
Post – CITES-R Personal Vulnerability		5.84	2.63	
Pre – CITES-R Dangerous World	17	5.58	1.89	-0.21(16)
Post – CITES-R Dangerous World		5.47	2.14	

Pre – CITES-R Empowerment	17	3.53	3.53	-0.74(16)
Post – CITES-R Empowerment		2.74	3.14	

For the Highly Distressed group (n = 19), participants reported significant symptom improvement for anxiety, PTSD, and parent-reported child internalizing problems. Overall attributions and attributions of self-blame and guilt improved from pre-treatment to post-treatment (see Tables 23 and 24).

Table 23

Summary of Pre- and Post-Treatment Symptom Variables for the Highly Distressed Cluster

Variable	*N*	*M*	*SD*	*t*(*df*)
Pre – CDI Total Score	19	59.84	12.85	-1.56(18)
Post – CDI Total Score		53.32	16.39	
Pre – RCMAS-2 Total Score	19	69.95	8.28	-3.55(18)*
Post – RCMAS-2 Total Score		60.47	13.83	
Pre – CITES-R PTSD Scale	19	38.00	5.69	-3.76(18)*
Post – CITES-R PTSD Scale		27.74	11.44	
Pre – CBCL Externalizing Scale	19	66.37	6.23	-1.39(18)
Post – CBCL Externalizing Scale		64.11	9.04	
Pre – CBCL Internalizing Scale	19	68.00	6.49	-2.53(18)*
Post – CBCL Internalizing Scale		63.84	7.88	

*$p < .05$

Table 24

Summary of Pre- and Post-Treatment Attribution Variables for the Highly Distressed Cluster

Variable	*N*	*M*	*SD*	*t*(*df*)
Pre – CITES-R Overall Attribution	19	29.05	6.27	-2.93(18)*
Post – CITES-R Overall Attribution		23.81	7.54	
Pre – CITES-R Self-Blame/Guilt	19	8.57	4.20	-3.22(18)*
Post – CITES-R Self-Blame/Guilt		5.67	3.69	
Pre – CITES-R Personal Vulnerability	19	8.81	1.99	-1.16(18)
Post – CITES-R Personal Vulnerability		7.81	3.19	
Pre – CITES-R Dangerous World	19	7.10	1.64	-1.01(18)
Post – CITES-R Dangerous World		6.57	2.46	
Pre – CITES-R Empowerment	19	4.57	2.96	-1.67(18)
Post – CITES-R Empowerment		3.76	3.21	

*$p < .05$

Lastly, for the complete sample ($N = 81$), participants reported significant symptom improvement on all self-report and parent-report symptom measures. For attributional change, there were positive changes for overall attributions, attributions of self-blame and guilt, and attributions of empowerment (see Tables 25 and 26).

Table 25

Summary of Pre- and Post-Treatment Symptom Variables for the Complete Sample

Variable	*N*	*M*	*SD*	*t*(*df*)
Pre – CDI Total Score	81	54.72	12.88	-4.39(80)*
Post – CDI Total Score		48.09	13.83	
Pre – RCMAS-2 Total Score	81	57.58	14.50	-2.01(80)*
Post – RCMAS-2 Total Score		54.63	12.86	
Pre – CITES-R PTSD Scale	81	28.22	9.12	-4.99(80)*
Post – CITES-R PTSD Scale		22.86	10.01	
Pre – CBCL Externalizing Scale	81	58.35	11.46	-2.02(80)*
Post – CBCL Externalizing Scale		56.54	10.97	
Pre – CBCL Internalizing Scale	81	59.69	11.61	-2.43(80)*
Post – CBCL Internalizing Scale		57.22	10.93	

*$p < .05$

Table 26

Summary of Pre- and Post-Treatment Attribution Variables for the Complete Sample

Variable	*N*	*M*	*SD*	*t*(*df*)
Pre – CITES-R Overall Attribution	81	22.72	9.67	-4.41(80)*
Post – CITES-R Overall Attribution		20.16	8.26	
Pre – CITES-R Self-Blame/Guilt	81	6.01	4.92	-4.46(80)*
Post – CITES-R Self-Blame/Guilt		4.46	4.24	
Pre – CITES-R Personal Vulnerability	81	7.04	3.15	-1.25(80)
Post – CITES-R Personal Vulnerability		6.78	3.01	
Pre – CITES-R Dangerous World	81	6.15	2.09	-0.57(80)
Post – CITES-R Dangerous World		6.06	2.02	

Pre – CITES-R Empowerment	81	3.61	3.08	-3.57(80)*
Post – CITES-R Empowerment		2.83	2.82	

*$p < .05$

Post-treatment associations between symptom change and attributional change. As the above results indicated, there were variable positive changes from pre-treatment to post-treatment within each cluster for individual symptom scores and attributions. However, due to considerable overlap in symptoms, an overall symptom score (described above) was utilized in the following analyses. Change scores were calculated for the overall symptom score as well as for each of the attributions. Pearson's Product-Moment Correlation analyses were conducted to investigate how changes in overall symptom score relates to changes in negative attributions for the complete sample and for each cluster group (see Table 27).

For the Subclinical group and for the Parent-Reported Child Distress group, there were no significant associations between changes in symptoms and attributional change. This means that participants who presented to treatment reporting minimal symptoms of depression, anxiety, and PTSD were not more likely to experience significant reductions in negative attributions. The same was true for children whose parents reported that the child was distressed. For the Marginal Self-Reported Distress group, there was a positive association between the overall symptom change score and attributions of personal vulnerability, meaning that children in this group who reported greater improvements in emotional distress were more likely to report greater reductions in personal vulnerability attributions over the course of treatment. For the Highly Distressed group, there were positive relationships between the overall symptom change score and overall attributions, self-blame/guilt attributions, and dangerous world attributions. This means that

participants in this group who reported greater improvements in emotional distress were more likely to report greater reductions in overall negative attributions, attributions of personal vulnerability, attributions of self-blame and guilt, and attributions of dangerous world. For the complete sample, there were positive associations between the overall symptom change score and attributions of personal vulnerability and dangerous world, meaning that children who reported greater improvements in emotional distress were more likely to report greater reductions in attributions of personal vulnerability and dangerous world.

Table 27

Correlation Matrix for Pre- to Post-treatment Attributional Change and Symptom Change for Each Cluster Group and the Complete Sample

Subclinical group (n = 7)							
Variable	*M*	*SD*	1	2	3	4	5
1. Change in overall attributions	.30	5.33	-				
2. Change in self-blame/guilt	-.80	2.35	.891*	-			
3. Change in personal vulnerability	.90	1.10	.988	-.034	-		
4. Change in dangerous world	-.20	1.87	.385	.111	.906	-	
5. Change in empowerment	-1.20	3.91	-.013	.165	.511	-.082	-
6. Change in emotional distress symptoms	.31	.25	.261	.175	.028	-.059	-.005

Marginal Self-Reported Distressed group (n = 38)							
Variable	*M*	*SD*	1	2	3	4	5
1. Change in overall attributions	-2.80	7.11	-				
2. Change in self-blame/guilt	-1.73	4.59	.753*	-			
3. Change in personal vulnerability	-.24	2.59	.639*	.168	-		
4. Change in dangerous world	.33	2.08	.477*	.168	.397*	-	
5. Change in empowerment	-1.29	2.83	.408*	.008	.194	-.049	-
6. Change in emotional distress symptoms	-.01	.54	.228	.052	.350*	.148	.067

Parent-Reported Child Distress group (n = 17)							
Variable	*M*	*SD*	1	2	3	4	5
1. Change in overall attributions	-2.84	10.3	-				
2. Change in self-blame/guilt	-1.45	5.02	.900*	-			
3. Change in personal vulnerability	-.45	2.58	.585*	.300	-		
4. Change in dangerous world	-.15	2.11	.292	.033	.672*	-	

5. Change in empowerment	-.79	4.66	.763*	.696*	.775	-.241	-
6. Change in emotional distress symptoms	-.02	.37	.147	.115	.166	.238	-.009

Highly Distressed group (n = 19)							
Variable	*M*	*SD*	1	2	3	4	5
1. Change in overall attributions	-.34	.45	-				
2. Change in self-blame/guilt	-2.90	8.18	.842*	-			
3. Change in personal vulnerability	-1.00	3.94	.779*	.439*	-		
4. Change in dangerous world	-.52	2.38	.792	.727*	.486*	-	
5. Change in empowerment	-.81	2.23	-.110	-.317	-.239	-.367	-
6. Change in emotional distress symptoms	-.34	.45	.542*	.524*	.392	.475*	-.182

Complete Sample (N = 81)							
Variable	*M*	*SD*	1	2	3	4	5
1. Change in overall attributions	-2.64	7.78	-				
2. Change in self-blame/guilt	-1.59	4.67	.811*	-			
3. Change in personal vulnerability	-.35	2.85	.624*	.268*	-		
4. Change in dangerous world	-.12	2.19	.457*	.183*	.328*	-	
5. Change in empowerment	-.88	2.99	.398*	.135	.104	-.099	-
6. Change in emotional distress symptoms	.02	.59	.092	-.045	.221*	.279*	-.095

*$p < .05$

Post-treatment to three-month follow-up changes in symptoms and changes in attributions. Paired samples *t*-tests were conducted to better understand what changes occurred in symptoms and attributions from post-treatment to three-month follow-up. For the Subclinical group (n = 5), participants did not report any significant symptom improvement or reductions in negative abuse attributions. For the Marginal Self-Reported Distress group (n = 26), participants did not report any significant symptom improvement or reductions in negative abuse attributions. For the Parent-Reported Child Distress group (n = 9), there were no significant improvements in symptoms or reductions in negative abuse attributions. For the Highly Distressed group (n = 11) and for the complete sample (N = 58), there were significant improvements in anxiety symptoms (see Tables 28 through 37).

Exploratory multiple regression analyses were considered, but ultimately were not conducted due to having a small sample size and a lack of significant findings for contextual factors in the previous aim (aim 2b).

Table 28

Post-Treatment and 3-Month Follow-Up Symptom Variables for Subclinical Group

Variable	*N*	*M*	*SD*	*t*(*df*)
Post – CDI Total Score	5	37.20	1.09	0.86(4)
Follow-Up – CDI Total Score		39.50	5.89	
Post – RCMAS-2 Total Score	5	50.20	11.95	0.53(4)
Follow-Up – RCMAS-2 Total Score		52.00	11.02	
Post – CITES-R PTSD Scale	5	13.80	2.59	-0.63(4)
Follow-Up – CITES-R PTSD Scale		12.80	5.17	
Post – CBCL Externalizing Scale	5	57.20	7.50	-0.49(4)
Follow-Up – CBCL Externalizing Scale		55.00	10.92	
Post – CBCL Internalizing Scale	5	56.40	7.54	-0.69(4)
Follow-Up – CBCL Internalizing Scale		54.80	9.83	

Table 29

Post-Treatment and 3-Month Follow-Up Attributions for Subclinical Group

Variable	*N*	*M*	*SD*	*t*(*df*)
Post – CITES-R Overall Attribution	5	12.50	4.64	-2.56(5)
Follow-Up – CITES-R Overall Attribution		17.33	5.68	
Post – CITES-R Self-Blame/Guilt	5	1.17	0.98	1.11(5)
Follow-Up – CITES-R Self-Blame/Guilt		2.00	2.10	
Post – CITES-R Personal Vulnerability	5	5.50	1.38	2.24(5)
Follow-Up – CITES-R Personal Vulnerability		7.00	1.67	
Post – CITES-R Dangerous World	5	3.33	1.86	1.11(5)
Follow-Up – CITES-R Dangerous World		4.17	1.17	
Post – CITES-R Empowerment	5	2.50	1.87	1.33(5)
Follow-Up – CITES-R Empowerment		4.17	3.60	

Table 30

Post-Treatment and 3-Month Follow-Up Symptom Variables for Marginal Self-Reported Distress Group

Variable	*N*	*M*	*SD*	*t*(*df*)
Post – CDI Total Score	26	49.12	17.12	0.20(25)
Follow-Up – CDI Total Score		49.58	15.09	
Post – RCMAS-2 Total Score	26	55.69	12.21	-1.09(25)
Follow-Up – RCMAS-2 Total Score		53.62	12.95	
Post – CITES-R PTSD Scale	26	25.00	8.85	0.11(25)
Follow-Up – CITES-R PTSD Scale		25.15	10.03	
Post – CBCL Externalizing Scale	26	51.88	9.50	-0.12(25)
Follow-Up – CBCL Externalizing Scale		52.08	12.63	
Post – CBCL Internalizing Scale	26	53.58	11.92	-0.55(25)
Follow-Up – CBCL Internalizing Scale		52.69	11.98	

Table 31

Post-Treatment and 3-Month Follow-Up Attributions for Marginal Self-Reported Distress Group

Variable	*N*	*M*	*SD*	*t*(*df*)
Post – CITES-R Overall Attribution	26	20.00	6.92	0.08(25)
Follow-Up – CITES-R Overall Attribution		20.12	9.54	
Post – CITES-R Self-Blame/Guilt	26	4.45	4.38	-0.72(25)
Follow-Up – CITES-R Self-Blame/Guilt		3.88	4.91	
Post – CITES-R Personal Vulnerability	26	6.83	2.73	1.03(26)
Follow-Up – CITES-R Personal Vulnerability		7.31	2.99	
Post – CITES-R Dangerous World	26	6.28	1.71	-0.58(26)
Follow-Up – CITES-R Dangerous World		6.00	2.52	
Post – CITES-R Empowerment	26	2.24	2.23	1.42(26)
Follow-Up – CITES-R Empowerment		2.93	2.59	

Table 32

Post-Treatment and 3-Month Follow-Up Symptom Variables for Parent-Reported Child Distress Group

Variable	*N*	*M*	*SD*	*t*(*df*)
Post – CDI Total Score	9	47.33	9.18	0.10(8)
Follow-Up – CDI Total Score		47.78	14.59	
Post – RCMAS-2 Total Score	9	52.00	9.09	-1.51(8)
Follow-Up – RCMAS-2 Total Score		48.11	11.11	
Post – CITES-R PTSD Scale	9	18.22	8.69	-1.10(8)
Follow-Up – CITES-R PTSD Scale		16.56	9.15	
Post – CBCL Externalizing Scale	9	63.00	12.70	-0.14(8)
Follow-Up – CBCL Externalizing Scale		62.56	16.27	
Post – CBCL Internalizing Scale	9	63.11	10.01	-0.19(8)
Follow-Up – CBCL Internalizing Scale		62.67	12.15	

Table 33

Post-Treatment and 3-Month Follow-Up Attributions for Parent-Reported Child Distress Group

Variable	*N*	*M*	*SD*	*t*(*df*)
Post – CITES-R Overall Attribution	9	16.45	3.59	0.74(8)
Follow-Up – CITES-R Overall Attribution		18.91	11.85	
Post – CITES-R Self-Blame/Guilt	9	2.64	1.69	0.69(8)
Follow-Up – CITES-R Self-Blame/Guilt		4.09	6.89	
Post – CITES-R Personal Vulnerability	9	6.36	2.69	-0.14(8)
Follow-Up – CITES-R Personal Vulnerability		6.27	2.57	
Post – CITES-R Dangerous World	9	5.82	1.17	-0.23(8)
Follow-Up – CITES-R Dangerous World		5.73	1.95	
Post – CITES-R Empowerment	9	1.64	2.11	1.24(8)
Follow-Up – CITES-R Empowerment		2.82	3.60	

Table 34

Post-Treatment and 3-Month Follow-Up Symptom Variables for Highly Distressed Group

Variable	*N*	*M*	*SD*	*t*(*df*)
Post – CDI Total Score	11	53.09	14.79	0.43(10)
Follow-Up – CDI Total Score		54.00	14.74	
Post – RCMAS-2 Total Score	11	62.82	13.47	-2.46(10)*
Follow-Up – RCMAS-2 Total Score		56.45	18.77	
Post – CITES-R PTSD Scale	11	30.64	10.12	-1.07(10)
Follow-Up – CITES-R PTSD Scale		28.55	11.10	
Post – CBCL Externalizing Scale	11	63.09	11.00	0.39(10)
Follow-Up – CBCL Externalizing Scale		64.27	7.85	
Post – CBCL Internalizing Scale	11	62.09	9.34	0.08(10)
Follow-Up – CBCL Internalizing Scale		62.27	7.85	

*$p < .05$.

Table 35

Post-Treatment and 3-Month Follow-Up Attribution Variables for Highly Distressed Group

Variable	*N*	*M*	*SD*	*t*(*df*)
Post – CITES-R Overall Attribution	11	25.15	8.65	0.00(10)
Follow-Up – CITES-R Overall Attribution		25.15	8.55	
Post – CITES-R Self-Blame/Guilt	11	6.08	4.31	-0.53(10)
Follow-Up – CITES-R Self-Blame/Guilt		5.62	5.06	
Post – CITES-R Personal Vulnerability	11	7.77	3.52	0.16(10)
Follow-Up – CITES-R Personal Vulnerability		7.92	2.72	
Post – CITES-R Dangerous World	11	7.15	2.12	0.49(10)
Follow-Up – CITES-R Dangerous World		7.38	1.50	
Post – CITES-R Empowerment	11	4.15	3.67	-0.10(10)
Follow-Up – CITES-R Empowerment		4.08	3.35	

Table 36

Post-Treatment and 3-Month Follow-Up Symptom Variables for the Complete Sample

Variable	*N*	*M*	*SD*	*t*(*df*)
Post – CDI Total Score	58	49.36	15.89	-0.35(57)
Follow-Up – CDI Total Score		48.83	15.03	
Post – RCMAS-2 Total Score	58	56.62	12.27	-2.92(57)*
Follow-Up – RCMAS-2 Total Score		53.02	13.57	
Post – CITES-R PTSD Scale	58	24.10	10.00	-1.14(57)
Follow-Up – CITES-R PTSD Scale		23.16	10.66	
Post – CBCL Externalizing Scale	58	56.66	10.92	-0.38(57)
Follow-Up – CBCL Externalizing Scale		56.24	13.08	
Post – CBCL Internalizing Scale	58	57.69	11.08	-1.23(57)
Follow-Up – CBCL Internalizing Scale		56.45	11.40	

*$p < .05$

Table 37

Post-Treatment and 3-Month Follow-Up Attribution Variables for the Complete Sample

Variable	*N*	*M*	*SD*	*t*(*df*)
Post – CITES-R Overall Attribution	58	20.79	9.37	-0.42(57)
Follow-up – CITES-R Overall Attribution		20.51	10.94	
Post – CITES-R Self-Blame/Guilt	58	4.74	4.87	-1.49(57)
Follow-up – CITES-R Self-Blame/Guilt		4.18	5.21	
Post – CITES-R Personal Vulnerability	58	7.02	3.02	0.04(57)
Follow-up – CITES-R Personal Vulnerability		7.03	3.32	
Post – CITES-R Dangerous World	58	5.97	1.90	0.39(57)
Follow-up – CITES-R Dangerous World		6.05	2.23	
Post – CITES-R Empowerment	58	3.00	3.04	0.98(57)
Follow-up – CITES-R Empowerment		3.23	3.24	

*$p < .01$

3-month follow-up associations between symptom change and attributional change. As hypothesized, there were no significant improvement in symptoms nor reductions in negative abuse attributions from post-treatment to three-month follow-up. These findings demonstrate stability of symptom and attributional improvement three-months after the end of treatment. Due to the lack of changes from post-treatment to three-month follow-up, correlational analyses using change scores were not conducted.

CHAPTER 4: DISCUSSION

Child sexual abuse (CSA) is prevalent and victim outcomes are heterogenous. CSA victims may experience a variety of symptoms, including social, emotional, and behavioral problems (Domhardt, Munzer, Fegert, & Goldbeck, 2015; Hebert, Tremblay, Parent, Daignault, & Piche, 2006; Kendall-Tackett, Williams, & Finkelhor, 1993). Some victims of CSA may not develop psychopathology or will present with subclinical levels of symptoms (Paolucci, Genuis, & Violato, 2001; Putnam, 2003). Variables that have been linked to victim outcome following CSA include abuse-specific factors, familial factors, and child characteristics (Dube et al., 2005; Ryan, Kilmer, Cause, Watanabe, & Hoyt, 2000; Stroebel et al., 2012; Yancey & Hansen, 2010). However, these factors are less likely to be targeted in treatment because they are not modifiable for the victim. Though scarce, some research has begun to investigate amenable factors to treatment, such as considering cognitive processes like attributions associated with victims' sexual abuse experiences.

The present study was unique in its sample and detailed examination of specific abuse attributions for victims of sexual abuse. This study provides a better understanding of abuse attributions and how they relate to different symptom clusters for CSA youth presenting to treatment. Overall, the findings of this study revealed four distinct clusters regarding symptom presentation for victims of CSA, lending support to previous research demonstrating that symptomatology is variable for victims (Kendall-Tackett et al., 1993; Tyler, 2002). Further, the study identified a relationship between negative abuse attributions and cluster membership, indicating that specific abuse attributions contribute

to symptom presentation. At post-treatment, changes in symptoms were positively associated with attributional change.

Identifying Heterogeneity in Symptom Presentation

To investigate the first aim of the study, a hierarchical cluster analysis was conducted using scores from pre-treatment youth self-report and parent-report measures to identify differences in symptom presentation among youth and non-offending parents attending Project SAFE treatment. Based on earlier research using Project SAFE data (Saywer & Hansen, 2014; Yancey et al., 2011), it was expected that there would be four distinct clusters of symptoms. Consistent with the hypothesis, four clusters were identified. The first cluster, labeled the "Subclinical" cluster, consisted of 19 CSA youth, which was 12.4% of the sample. Youth in this cluster did not exhibit clinical elevations on any of the child-report and caregiver-report measures. This is consistent with prior literature suggesting that approximately 20-50% of victims of CSA do not experience clinical levels of symptoms (Domhardt et al., 2015; Paolucci et al., 2001; Putnam, 2003).

Previous research has demonstrated that parent- and self-report regarding child symptomatology are often discrepant (De Los Reyes & Kazdin, 2005). This was evident in the current study with the second cluster exhibiting elevations only on self-reported variables and the third cluster exhibiting elevations only on parent-reported child distress variables. The second cluster was labeled "Marginal Self-Reported Distress" and consisted of 62 CSA youth, which was 40.5% of the sample. CSA youth in this cluster had slightly elevated scores on self-reported anxiety symptoms, PTSD symptoms, and depression symptoms, and scores below the mean on non-offending parent-report measures. The third cluster was labeled "Parent-Reported Child Distress" and consisted

of 41 CSA youth, which was 26.8% of the sample. This cluster identified CSA youth who had elevated scores on parent-report measures and scores below the mean on all self-report measures.

The final cluster was labeled "Highly Distressed" and consisted of 31 CSA youth, which was 20.3% of the sample. CSA youth in this cluster had elevated scores on all self-report and parent-report measures, consistent with previous research indicating that youth with a history of sexual abuse may present with combinations of externalizing and internalizing symptoms (Domhardt et al., 2015; Hebert et al., 2006; Wolfe, 2006).

Taken together, the study continues to demonstrate that victims of CSA should not be thought of as a homogenous group. Instead, outcomes vary drastically for CSA victims. Depending on the measures examined and the age range included, victim groups differ, further providing evidence that there is no definitive outcome or presentation for a youth with a history of sexual abuse.

Differences in Cluster Membership Based on Abuse Attributions

The second aim of the study examined the relationship between sexual abuse-related attributions and cluster membership. Previous research has examined potential factors contributing to varied outcomes for CSA victims, such as child characteristics, abuse-related factors, and familial variables, but conclusions have been inconsistent (Dube et al., 2005; Paolucci et al, 2001; Ryan et al., 2000). While these are important contextual factors, they are typically not the focus of treatment because they are not amenable to change. Instead, research has begun to investigate cognitive factors, such as abuse attributions, to attempt to explain differences in outcomes. Based on previous research with smaller sample sizes of Project SAFE data (Sawyer & Hansen, 2014;

Sedlar, 2001; Yancey, Hansen, & Naufel, 2011) as well as research demonstrating a relationship between abuse attributions and symptomology (Valle & Silvosky, 2002; Wolfe, 1991), it was hypothesized that each cluster group would have different profiles of sexual abuse-specific attributions.

To examine this aim, ANOVA's were conducted using pre-treatment data from the Abuse Attributions scale of the CITES-R. As noted, this scale has four subscales (i.e., self-blame/guilt, personal vulnerability, dangerous world, and empowerment) and these were used in the analyses. Findings indicated there were overall differences between cluster groups regarding overall attributions, self-blame/guilt, personal vulnerability, and dangerous world attributions. Specifically, the symptomatic cluster groups (i.e., Marginal Self-Reported Distress, Parent-Reported Child Distress, and Highly Distressed) had more self-blame and guilt, feelings of personal vulnerability, and dangerous world attributions compared to the Subclinical group. These findings are consistent with previous research indicating that individuals with negative attributions are more likely to have elevated internalizing and externalizing symptoms (Feiring, Taska, & Chen, 2002; Gibb, 2002; Harkness & Lumley, 2008). Prior research has also indicated that individuals who blame themselves for the abuse, feel vulnerable to future abuse, and are fearful of the world are likely to report greater levels of distress (Canton-Cortes et al., 2012; Daigneault et al., 2006; Wolfe et al., 1991).

Interestingly, the association between attributions of empowerment and cluster membership was not significant, meaning that feeling empowered to stop future abuse did not associate with symptom presentation for victims of sexual abuse. The Empowerment subscale includes statements about feeling confident in stopping future

abuse (e.g., “Things like this WILL NOT happen again”). The current findings contrast previous studies by Cohen at al. (1999) and Celano et al. (1996), which provided evidence for a relationship between feeling empowered to stop future abuse and symptom presentation. Specifically, Cohen et al. (1999) findings demonstrated that youth who had been sexually abused felt more empowered to stop future revictimization and reported fewer symptoms compared to non-abused youth. One reason for discrepancies may be the fact that this type of attribution is positively worded compared to the other types of attributions. Another reason may be because the empowerment subscale of the CITES-R (Wolfe, 1991) might not be completely capturing a type of abuse attribution like the other subscales. Cohen et al. (1999) noted that his findings seemed counterintuitive and posited that the “empowerment” label might be assessing for knowledge about self-protection.

Since child characteristics (e.g., child age, gender), abuse-related factors (e.g., CSA severity, victim-perpetrator relationship), and family variables (e.g., family cohesiveness, family’s attitudes and behaviors toward problem-solving) have been discussed within the literature as impacting outcomes for youth with a history of CSA (Bhandari et al., 2011; Dube et al., 2005; Hebert et al., 2006), General Linear Models were conducted to further examine the relationship between abuse attributions and cluster membership while controlling for these factors. The models for overall attributions, self-blame and guilt attributions, personal vulnerability attributions, and dangerous world attributions continued to have significant overall effects for cluster membership when all other variables were held constant at zero. These findings emphasize the value of understanding negative abuse-specific attributions in addition to assessments of

contextual factors that are routinely studied. However, there was no overall effect for attributions of empowerment and cluster membership.

Interestingly, only family's attitudes and behaviors toward family problem-solving and child-perpetrator relationship variables were significant covariates in some of the models. There was a significant effect of family's attitudes and behaviors toward problem-solving within the model examining the association between self-blame and guilt attributions and cluster membership. There was also a significant effect of child-perpetrator relationship within the models examining the association between personal vulnerability attributions and cluster membership as well as dangerous world attributions and cluster membership. These results are consistent with prior studies indicating that these variables are important in the development of psychopathology post-abuse (Hebert et al., 2006; Seehus et al., 2015; Sheidow et al., 2014; Trickett et al., 2001).

However, none of the other covariate factors, such as child characteristics and severity of abuse, had significant main effects within the models investigating the relationship between attributions and cluster membership. These results are inconsistent with the majority of the CSA outcome literature suggesting that these factors are strongly related to consequences post-abuse (e.g., Dube et al., 2005; Townsend & Rheingold, 2013; Trickett & McBride-Chang, 1995). On the other hand, the current findings are consistent with other studies indicating no support for relationships between these factors and development of maladaptive outcomes (Manion et al., 1998; Paolucci et al., 2001; Stern et al., 1995). Some potential reasons for the inconsistencies regarding which covariates impact outcomes include the type of sample, differing age ranges, and different measures used for assessing abuse attributions.

In addition, the current study took a different approach to cognitive attributions by examining CSA-specific attributions, instead of examining internal, stable, and global attributions. Sexual abuse-related attributions are thoughts made specifically about a sexual abuse experience, such as self-blame and guilt, personal vulnerability, dangerous world, and empowerment (Valle & Silovsky, 2002; Wolfe et al., 1991). These types of attributions may provide better information for targeting abuse-related attributions in treatment for child sexual abuse victims because of the specificity of cognitions. These types of attributions may have a stronger relationship with outcomes, thus the contextual factors may not be as impactful in the development of CSA consequences. The current findings highlight the significance for recognizing and understanding negative abuse attributions that youth may have when presenting to psychological treatment. Victims of sexual abuse reporting more negative attributions are likely to present with clinically elevated symptomatology. Cohen and Mannarino (2002) noted that symptoms are likely to decrease by targeting attributions in treatment.

It should also be noted that some of the clusters did not differ significantly on abuse attributions, even after controlling for contextual factors. An interesting finding is that the Marginal Self-Reported Distress and Parent-Reported Child Distress groups did not differ on any of the abuse attributions (e.g., overall attributions, self-blame and guilt).

Associations between Changes in Symptoms and Changes in Attributions

Prior research has indicated that treatment has positive effects on symptoms at post-treatment for victims of CSA (Benuto & O'Donohue, 2015; Taylor & Harvey, 2010), although there is less evidence for maintenance of symptom reduction months after treatment has ended. In addition to examining symptom change, there is evidence

that treatment can target and modify maladaptive attributions and cognitions (Cohen & Mannarino, 2002; Deblinger & Runyon, 2005; Sharma-Patel & Brown, 2016). Thus, the third aim of the study examined how symptom change relates to attributional change at post-treatment and at three-month follow-up. Due to the nature and context within which the study resides, it was hypothesized that as negative abuse-specific attributions decreased, symptoms would improve at post-treatment. It was further hypothesized that there would not be significant changes in symptoms and attributions from post-treatment to three-month follow-up. Instead, what changes occurred at post-treatment would be maintained at the three-month follow-up. Lastly, it was hypothesized that each cluster group would demonstrate both symptom improvement and decreases in abuse attributions at post-treatment, and these changes would be maintained at the three-month follow-up.

Consistent with the hypothesis, symptoms significantly improved for the entire sample from pre-treatment to post-treatment for all symptoms, including depression, anxiety, PTSD, and parent-reported child behaviors, and these changes maintained at the three-month follow-up. These findings are consistent with prior studies (Cary & McMillen, 2012; Cohen, Deblinger, Mannarino, & Areliano, 2001) and provide additional evidence that treatment for CSA victims can positively impact functioning by improving symptoms. Regarding attributions, CSA youth reported reductions in overall attributions, and they reported feeling less blame and guilt at post-treatment compared to before starting treatment.

When investigating symptom and attributional improvement for individual clusters, the samples were small and changes were variable at post-treatment. There might not have been enough youth in each group to show adequate change in symptoms.

In addition, there were non-significant changes in attributions and symptoms between post-treatment and three-month follow-up, consistent with one of the hypotheses noting that there would be no significant changes at the follow-up.

Lastly, findings demonstrated support for a relationship between changes in an overall symptom score and changes in attributions at the end of treatment, and these changes were maintained at the three-month follow-up. For the Marginal Self-Reported Distress group, youth who reported greater improvements in emotional distress were more likely to report greater reductions in attributions of personal vulnerability over the course of treatment. For the Highly Distressed group, youth in this group who reported greater improvements in emotional distress were more likely to report greater reductions in overall negative attributions, attributions of personal vulnerability, attributions of self-blame and guilt, and attributions of dangerous world. For the complete sample, youth who reported greater improvements in emotional distress were more likely to report greater reductions in attributions of personal vulnerability and dangerous world. For the Subclinical group and for the Parent-Reported Child Distress group, there were no significant associations. Youth who presented to treatment reporting minimal symptoms were not more likely to experience significant reductions in negative attributions. Similarly, youth whose parents reported that the child was distressed were not more likely to experience significant reductions in negative attributions. The lack of significant associations in the Subclinical and Parent-Reported Child Distress groups could be due to the small sample size within each cluster.

These findings highlight the importance of targeting abuse attributions in treatment due to the relationship between how youth think about their sexual abuse

experience and symptom presentation. There is evidence from previous studies indicating that targeting negative abuse attributions in treatment for CSA youth will have positive impacts on symptoms and their functioning at the end of treatment (Cohen et al., 2006; Cohen & Mannarino, 2000). Specifically, when children feel less blame and guilt about their sexual abuse experience they are less likely to exhibit clinical levels of symptoms. In addition, when children feel more secure with the world around them they are less likely to exhibit clinical levels of symptoms.

Findings from post-treatment to three-month follow-up indicated very little change in symptoms and attributions, consistent with the hypothesis that there would be non-significant changes from post-treatment to three-month follow-up. Though changes in attributions were not significant, means for the individual attributions appeared to be increasing at the follow-up compared to post-treatment.

Limitations

There are several limitations to consider regarding the present study. Because the data were archival, the availability of measures and variables were limited. Since the crux of the project focused on sexual abuse attributions, having more than one measure of abuse attributions would have provided additional and stronger evidence for the relationships between abuse attributions, symptomatology, and cluster membership.

Further, Chaffin and Schultz (2001) reported that the CITES-R Attributions scale may be inherently weak, especially when examining the subscales of the Attributions scale. In the current study, attributions of dangerous world and attributions of personal vulnerability were rarely significantly associated with symptoms and cluster membership. Attributions of empowerment were not significantly associated with symptoms or cluster

membership. The surprising lack of significant findings of specific abuse attributions and symptoms are likely due to the inherent limitations of the scale and the archival nature of the study. In addition, specific to the empowerment subscale in the current study, the data were considerably positively skewed. Caution should be used when interpreting these results. Thus, continued examination of abuse attributions is warranted, and future research should utilize additional measures of sexual abuse-specific attributions.

When utilizing cluster analyses to identify groups based on self- and parent-reported symptoms, the cluster groups had small sample sizes, particularly at post-treatment and the three-month follow-up. Findings may have presented differently if cluster groups were larger. Future studies utilizing larger samples of child and adolescent CSA victims may allow for greater confidence in findings. Extension and replication studies with Project SAFE data will be helpful in continuing to understand the varied outcomes children and adolescents present with at treatment. In addition, research would benefit from utilizing different treatment groups to study distinctive cluster profiles.

As noted, the post-treatment and three-month follow-up analyses had even smaller sample sizes. This is likely due to attrition. Future studies should strive to gather post-treatment and follow-up information to better understand stability in treatment success. In addition, longitudinal studies are needed to determine how symptoms and attributions change or remain stable when treatment ends.

The family variables in the study were also limited by the archival nature of the study. Family cohesiveness and beliefs regarding problem-solving during difficult situations were not significant covariates in most of the models examining the relationship between abuse attributions and cluster membership, though research

indicates family variables are significant factors in predicting CSA outcomes. This study did not explore the relationship between family variables and negative abuse attributions. Future research would benefit from utilizing additional family measures to further examine the impact family has on outcomes following sexual abuse. In addition, future studies would benefit from investigating the relationship between family variables and abuse attributions.

Lastly, families participating in Project SAFE were aware of the importance of the research being conducted. Families had the option to participate in research; participation was not required to attend treatment. As with any research, there are always potential differences between those who volunteer to participate in research compared to those who do not volunteer. Unfortunately, there is no way to assess these differences. For generalization purposes, this should be noted and findings interpreted with these differences in mind.

Strengths

Despite the limitations, the current study had several strengths. This study utilized a clinical sample with children instead of a more convenient sample (e.g., college students). Participants were recruited from a cognitive-behavioral treatment group for sexual abuse victims, which provided comprehensive data to be gathered about symptoms and abuse attributions prior to beginning treatment as well as throughout treatment and at three-month follow-up. This is a unique aspect of the current study because this allowed for examination of the complex relationship between how children perceive their sexual abuse experience and symptomatology.

Similarly, another unique strength is the ability to examine sexual abuse-specific attributions instead of general attributions about trauma or childhood maltreatment. Though there were inherent limitations with part of the measure used to operationalize abuse attributions, the findings from the current study demonstrate the importance of examining specific abuse attributions because they are associated with different types of symptoms as well as different elevations in those symptoms.

In addition, data for the study were obtained from multiple informants. Caregiver report of child emotional and behavioral functioning was gathered in conjunction with child report. Gathering information from the caregiver provides a fuller understanding of the child's presenting problems following sexual abuse. There were discrepancies between some caregiver and child reports. For example, when youth self-reported high internalizing symptoms, caregivers were more likely to report externalizing symptoms instead of internalizing symptoms. Nonetheless, having both reporters was important in identifying the symptom clusters.

Though it was previously noted that the sample size for the cluster groups was small, prior research studies examining Project SAFE data have been smaller (Sawyer & Hansen, 2014; Sedlar, 2001; Yancey et al., 2013). Findings demonstrated that there are subgroups of CSA outcomes. The cluster groups elucidated in the study provide evidence and supplement prior research that child sexual abuse outcomes are not homogeneous. Lastly, this study examined how symptom clusters differ in regards to sexual abuse-specific attributions, which has never been investigated in the CSA outcome literature. While this study controlled for contextual variables (e.g., child age, abuse severity), future directions should explore how these factors may be associated with

cluster membership. Instead of viewing CSA youth as a homogenous group, examining how other variables are associated with these symptom clusters may provide better insight into how youth present to treatment and may provide additional clarity for which youth are at higher risk for psychopathology following sexual abuse.

Conclusions and Implications

In conclusion, the current study provides additional support that CSA youth present in a myriad of ways, from exhibiting internalizing symptoms to externalizing symptoms to a combination of both. The Highly Distressed, Marginal Self-Reported Distress, and Parent-Reported Child Distress groups exemplify these findings. In addition, some victims present with minimal to no symptoms following their sexual abuse experience (i.e., Subclinical group). The current study indicates that abuse attributions have a strong relationship with these symptom groups following CSA, independent of other factors that have been examined (e.g., gender, age, victim-perpetrator relationship). Importantly, the findings indicate that negative abuse attributions differ between cluster groups. When treating youth with histories of sexual abuse, it is important to recognize how they interpret their abuse experience because this will allow for better intervention (Sharma-Patel & Brown, 2016).

References

Abramson, L. Y., Metalsky, G. I., Alloy, L. B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review, 96,* 358-372.

Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology, 87,* 49-74.

Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for the ASEBA School-Age forms & profiles.* Burlington, VT: University of Vermont Research Center for Children, Youth, & Families.

Aldenderfer, M. S., & Blashfield, R. K. (1984). *Cluster analysis: Quantitative applications in the social sciences* (Vol. 44). Thousand Oaks, CA: Sage Publications.

Alloy, L. B., Abramson, L. Y., Safford, S. M., Gibb. B. E. (2006). The cognitive vulnerability to depression (CVD) project: Current findings and future direction. In L. B. Alloy J. H. & Riskind (Eds.), *Cognitive vulnerability to emotional disorders* (pp. 33-62). New York, NY: Lawrence Erlbaum Associates.

Andrews, G., Corry, J., Slade, T., Issakidis, C., & Swanston, H. (2004). Child sexual abuse. In: M. Ezzati, D. Lopez, A. Rodgers, & C. J. L Murray (Eds.), *Comparative quantification of health risks* (pp. 1850-1940). Geneva, Switzerland: World Health Organization.

Barker-Collo, S. L. (2001). Adult reports of child and adult attributions of blame for childhood sexual abuse: Predicting adult adjustment and suicidal behaviors in females. *Child Abuse & Neglect, 25,* 1329–1341.

Barker-Collo, S., & Read, J. (2003). Models of response to childhood sexual abuse: Their implications for treatment. *Trauma, Violence, & Abuse, 4,* 95-111.

doi:10.1177/1524838002250760

Barth, J., Bermetz, L., Heim, E., Trelle, S., & Tonia, T. (2013). The current prevalence of child sexual abuse worldwide: A systematic review and meta-analysis. *International Journal of Public Health, 58,* 469-483. doi:10.1007/s00038-012-0426-1.

Beitchman, J. H., Zucker, K. J., Hood, J. E., DaCosta, G. A., & Akman, D. (1991). A review of the short-term effects of child sexual abuse. *Child Abuse & Neglect, 15,* 537-556.

Benuto, L. T., & O'Donohue, W. (2015). Treatment of the sexually abused child: Review and synthesis of recent meta-analyses. *Children and Youth Services Review, 56,* 52-60. http://dx.doi.org/10.1016/j.childyouth.2015.06.009

Bergen, H. A., Martin, G., Richardson, A. S., Allison, S., & Roeger, L. (2004). Sexual abuse, antisocial behavior and substance use: Gender differences in young community adolescents. *Australian and New Zealand Journal of Psychiatry, 38,* 34-41.

Berliner, L., & Elliott, D. M. (2002). *Sexual abuse of children.* In J. E. B. Myers, L. Berliner, J. Briere, C. T. Hendrix, C. Jenny, & T. A. Reid (Eds.), *The APSAC handbook on child maltreatment* (p. 55–78). Sage Publications.

Bhandari, S., Winter, D., Messer, D., & Metcalfe, C. (2011). Family characteristics and long-term effects of childhood sexual abuse. *British Journal of Clinical Psychology, 50,* 435-451. doi:10.1111/j.2044-8260.2010.02006.x

Brown, E. J., & Kolko, D. J. (1999). Child victims' attributions about being physically abused: An examination of factors associated with symptom severity. *Journal of Abnormal Child Psychology, 27,* 311-322.

Brown, J. D., & Siegel, J. M. (1988). Attributions of negative life events and depression: The role of perceived control. *Journal of Personality and Social Psychology, 54,* 316-322.

Calam, R., Horne, L., Glasgow, D., & Cox, A. (1998). Psychological disturbance and child sexual abuse: A follow-up study. *Child Abuse & Neglect, 22,* 901-913.

Canton-Cortes, D., Cortes, M. R., & Canton, J. (2012). The role of traumagenic dynamics on the psychological adjustment of survivors of child sexual abuse. *European Journal of Developmental Psychology, 9,* 665-680. doi:10.1080/17405629.2012.660789

Cary, C. E., & McMillen, J. C. (2012). The data behind the dissemination: A systematic review of trauma-focused cognitive behavioral therapy for use with children and youth. *Children and Youth Services Review, 34,* 748-757. doi:10.1016/j.childyouth.2012.01.003

Celano, M., Hazzard, A., Campbell, S. K., & Lang, C. B. (2002). Attribution retraining with sexually abused children: Review of techniques. *Child Maltreatment, 7,* 64-75.

Celano, M., Hazzard, A., Webb, C., & McCall, C. (1996). Treatment of traumagenic beliefs among sexually abused girls and their mothers: An evaluation study. *Journal of Abnormal Child Psychology, 24,* 1-17.

Centers for Disease Control and Prevention (2016, April 1). Adverse childhood

experiences (ACE) study: Data and statistics. Retrieved from http://www.cdc.gov/ace/prevalence.htm

Child Welfare Information Gateway. (2014). Definitions of child abuse and neglect. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau.

Chaffin, M., & Shultz, S. (2001). Psychometric evaluation of the Children's Impact of Traumatic Events Scale – Revised. *Child Abuse & Neglect, 25*, 401-411.

Cohen, J. B., Deblinger, E., Maedel, A. B., & Stauffer, L. B. (1999). Examining sex-related thoughts and feelings of sexually abused and nonabused children. *Journal of Interpersonal Violence, 14,* 701-712.

Cohen, J. A., Deblinger, E., Mannarino, A. P., & Areliano, M. A. (2001). The importance of culture in treating abused and neglected children: An empirical review. *Child Maltreatment, 6,* 148-157.

Cohen, J. A., Deblinger, E., Mannarino, A. P., & Steer, R. A. (2004). A multisite, randomized controlled trial for children with sexual abuse-related PTSD symptoms. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 393-402.

Cohen, J. A., & Mannarino, A. P. (2000). Predictors of treatment outcome in sexually abused children. *Child Abuse & Neglect, 24,* 983-994.

Cohen, J. A., & Mannarino, A. P. (2002). Addressing attributions in treating abused children. *Child Maltreatment, 7,* 82-86.

Cohen, J. A., Mannarino, A. P., & Deblinger, E. (2006). *Treating trauma and traumatic grief in children and adolescents*. New York, NY: Guilford.

Cohen, J. A., Mannarino, A. P., Knudsen, K. (2005). Treating sexually abused children: 1-year follow-up of a randomized controlled trial. *Child Abuse & Neglect, 29,* 135-145. doi:10.1016/j.chiabu.2004.12.005

Daigneault, I., Hebert, M., & Tourigny, M. (2006). Attributions and coping in sexually abused adolescents referred for group treatment. *Journal of Child Sexual Abuse, 15,* 35-59. doi:10.1300/J070v15n03_03

Deblinger, E., Taub, B., Maedel, A. B., Lippmann, J., & Stauffer, L. B. (1997). Psychosocial factors predicting parent reported symptomatology in sexually abused children. *Journal of Child Sexual Abuse, 6,* 35-49.

De Los Reyes, A., & Kazdin, A. E. (2005). Informant discrepancies in the assessment of childhood psychopathology: A critical review, theoretical framework, and recommendations for further study. *Psychological Bulletin, 131,* 483-509.

Derogatis, L. (1994). *Symptom Checklist- 90–R: SCL-90-R: Administration, scoring, and procedural manual*. Minneapolis, MN: National Computer Systems.

Domhardt, M., Munzer, A., Fegert, J. M., & Goldbeck, L. (2015). Resilience in survivors of child sexual abuse: A systematic review of the literature. *Trauma, Violence, & Abuse, 16,* 476-493.

Dube, S. R., Anda, R. F., Whitfield, C. L., Brown, D. W., Felitti, V. J., Dong, M., & Giles, W. H. (2005). Long-term consequences of childhood sexual abuse by gender of victim. *American Journal of Preventive Medicine, 28,* 430-438. doi:10.1016/j.amepre.2005.01.015

Edgardh, K., & Ormstad, K. (2000). Prevalence and characteristics of sexual abuse in a national sample of Swedish seventeen-year-old boys and girls. *Acta Paediatrica, 88,* 310-319. doi:10.1080/080352500750028456

Fassler, I. R., Amodeo, M., Griffin, M. L., Clay, C. M., & Ellis, M. A. (2005). Predicting long-term outcomes for women sexually abused childhood: Contribution of abuse severity versus family environment. *Child Abuse & Neglect, 29,* 269-284. doi:10.1016/j.chiabu.2004.12.006

Feiring, C., & Cleland, C. (2007). Childhood sexual abuse and abuse-specific attributions of blame over 6 years following discovery. *Child Abuse & Neglect, 31,* 1169-1186. doi:10.1016/j.chiabu.2007.03.020

Feiring, C., Taska, L., & Chen, K. (2002). Trying to understand why horrible things happen: Attribution, shame, and symptom development following sexual abuse. *Child Maltreatment, 7*, 26-41.

Feiring, C., Taska, L., & Lewis, M. (1999). Age and gender differences in children's and adolescents' adaptation to sexual abuse. *Child Abuse & Neglect, 23,* 115-128.

Feiring, C., Taska, L., & Lewis, M. (2002). Adjustment following sexual abuse discovery: The role of shame and attributional style. *Developmental Psychology, 38,* 79-92.

Finkelhor, D. (1994). The international epidemiology of child sexual abuse. *Child Abuse & Neglect, 18*, 409-417. doi:10.1016/0145-2134(94)90026-4

Finkelhor, D., & Berliner, L. (1995). Research on the treatment of sexually abused children: A review and recommendations. *Journal of the American Academy of Child, 34,* 1408-1423.

Fischer, D. G., & McDonald, W. L. (1998). Characteristics of intrafamilial and extrafamilial child sexual abuse. *Child Abuse & Neglect, 22*, 915-929.

Friedenberg, S. L., Hansen, D. J., & Flood, M. F. (2013). Epidemiology of child and adolescent sexual abuse. In D. S. Bromberg, W. T. O'Donohue, & D. S. Bromberg (Eds.), *Handbook of child and adolescent sexuality: Developmental and forensic psychology* (pp. 303-324). San Diego, CA: Elsevier Academic Press. doi: 10.1016/B978-0-12-387759-8.00012-X

Gibb, B. E. (2002). Childhood maltreatment and negative cognitive styles: A quantitative and qualitative review. *Clinical Psychology Review, 22,* 223-246.

Gibb, B. E., Alloy, L. B., Abramson, L. Y., Rose, D. T., Whitehouse, W. G., Donovan, P., Hogan, M. E., Cronholm, J., & Tierney, S. (2001). History of childhood maltreatment, depressogenic cognitive style, and episodes of depression in adulthood. *Cognitive Therapy and Research*, *25*, 425–446.

Gold, E. R. (1986). Long-term effects of sexual victimization in childhood: An attributional approach. *Journal of Consulting and Clinical Psychology, 54,* 471-475.

Gray, S., & Rarick, S. (2018). Exploring gender and racial/ethnic differences in the effects of child sexual abuse. *Journal of Child Sexual Abuse, 27,* 570-587. https://doi.org/10.1080/10538712.2018.1484403

Griffin, M. L., & Amodeo, M. (2010). Predicting long-term outcomes for women physically abused in childhood: Contribution of abuse severity versus family environment. *Child Abuse & Neglect, 34,* 724-733. doi:10.1016/j.chiabu.2010.03.005

Gross, A. B., & Keller, H. R. (1992). Long-term consequences of childhood physical and psychological maltreatment. *Aggressive Behavior, 18,* 171-185.

Hansen, D. J., Hecht, D. B., & Futa, K. T. (1998). Child sexual abuse. In V. B. Van Hasselt & M. Hersen (Eds.), *Handbook of psychological treatment protocols for children and adolescents* (pp. 153-178). Mahwah, NJ: Erlbaum.

Harkness, K. L., & Lumley, M. N. (2008). Child abuse and neglect and the development of depression in children and adolescents. In J. R. Z. Abela & B. L. Hankin (Eds.), *Handbook of depression in children and adolescents* (pp. 466-488). New York, NY:Guilford Press.

Hebert, M., Tremblay, C., Parent, N., Daignault, I. V., & Piche, C. (2006). Correlates of behavioral outcomes in sexually abused children. *Journal of Family Violence, 21,* 287-299. doi:10.1007/s10896-006-9026-2

Hsu, E. (2003). *Parallel group treatment for sexually abused children and their nonoffending parents: An examination of treatment integrity and child and family outcome and satisfaction* (Unpublished doctoral dissertation). University of Nebraska–Lincoln.

Hubel, G. S., Campbell, C., West, T., Friedenberg, S., Schreier, A., Flood, M. F., & Hansen, D. J. (2014). Child advocacy center based group treatment for child sexual abuse. *Journal of Child Sexual Abuse, 23,* 304-325. doi:10.1080/10538712.2014.888121

Janoff-Bulman, R., & Frieze, I. H. (1983). A theoretical perspective for understanding reactions to victimization. *Journal of Social Issues, 39,* 1-17. https://doi.org/10.1111/j.1540-4560.1983.tb00138.x

Kaufman, J. (1991). Depressive disorders in maltreated children. *Journal of the American Academy of Child and Adolescent Psychiatry, 30,* 257-265.

Kelley, H. H., & Michela, J. L. (1980). Attribution theory and research. *Annual Review of Psychology, 31,* 457-501.

Kendall-Tackett, K. A., Williams, L. M., & Finkelhor, D. (1993). Impact of sexual abuse on children: A review and synthesis of recent empirical studies. *Psychological Bulletin, 113,* 164-180.

Ketring, S. A., & Feinauer, L. L. (1999). Perpetrator-victim relationship: Long-term effects of sexual abuse for men and women. *The American Journal of Family Therapy, 27,* 109-120.

Kolko, D. J., Brown, E. J., & Berliner, L. (2002). Children's perceptions of their abusive experience: Measurement and preliminary findings. *Child Maltreatment, 7,* 41-53.

Kovacs, M. (1992). *The Children's Depression Inventory (CDI)*. Multi-Health Systems: Tonawanda, NY.

Kovacs, M. (2011). *The Children's Depression Inventory 2 (CDI-2)*. Multi-Health Systems: Tonawanda, NY.

Lumley, M. N., & Harkness, K. L. (2007). Specificity in the relations among childhood adversity, early maladaptive schemas, and symptom profiles in adolescent depression. *Cognitive Therapy and Research, 31,* 639-657. doi:10.1007/s10608-006-9100-3

Manion, I., Firestone, P., Cloutier, P., Ligezinska, M., McIntyre, J., & Ensom, R. (1998). Child extrafamilial sexual abuse: Predicting parent and child functioning. *Child Abuse & Neglect, 22,* 1285-1304.

Mannarino, A. P., Cohen, J. A., Smith, J. A., & Moore-Motily, S. (1991). Six- and twelve-month follow-up of sexually abused girls. *Journal of Interpersonal Violence, 6,* 494-511.

McCrae, J. S., Chapman, M. V., & Christ, S. L. (2006). Profile of children investigated for sexual abuse: Association with psychopathology symptoms and services. *American Journal of Orthopsychiatry, 76,* 468-481.

McCubbin, H. I., Larsen, A. S., & Olson, D. H. (1982). F-COPES: Family coping strategies. In D. H. Olson, H. I. McCubbin, H. Barnes, A. Larsen, M. Muxen, & M. Wilson (Eds.), *Family inventories: Inventories used in a national survey of families across the family life cycle* (pp. 101-119). St. Paul, MN: University of Minnesota.

McGee, R., Wolfe, D., & Olson, J. (2001). Multiple maltreatment, attribution of blame, and adjustment among abused and neglected children grown up. *Development and Psychopathology, 13,* 1021–1038.

Mennen, F. E., & Meadow, D. (1995). The relationship of abuse characteristics to symptoms in sexually abused girls. *Journal of Interpersonal Violence, 10,* 259-274.

Oellerich, T. (2002). The case against the routine provision of psychotherapy to children/adolescents labeled "sexually abused." *Sexuality & Culture: An Interdisciplinary Quarterly, 6,* 3-24.

Okur, P., Pereda, N., Van Der Knaap, L. M., & Bogaerts, S. (2018). Attributions of blame among victims of child sexual abuse: Findings from a community sample. *Journal of Child Sexual Abuse, 28,* 301-317. doi:10.1080/10538712.2018.1546249

Olson, D. H. (2011). FACES IV & the Circumplex Model: Validation Study. *Journal of Marital & Family Therapy, 37,* 64-80. doi:10.1111/j.1752-0606.2009.00175.x.

Paolucci, E. O., Genuis, M. L., & Violato, C. (2001). A meta-analysis of the published research on the effects of child sexual abuse. *The Journal of Psychology, 135,* 17-36.

Pereda, N., Guilera, G., Forns, M., and Gomez-Benito, J. (2009). The prevalence of child sexual abuse in community and student samples: A meta-analysis. *Clinical Psychology Review, 29,* 328-338.

Putnam, F. W. (2003). Ten-year research update review: Child sexual abuse. *American Academy of Child and Adolescent Psychiatry, 42,* 269-278. doi:10.1097/01.CHI.0000037029.04952.72

Reynolds, C. R., & Richmond, B. O. (1985). *Revised Children's Manifest Anxiety Scale*. Los Angeles: Western Psychological Services.

Roberts, R., O'Connor, T., Dunn, J., & Golding, J. (2004). The effects of child sexual abuse in later family life; mental health, parenting, and adjustment of offspring. *Child Abuse & Neglect, 28,* 525-545. doi:10.1016/j.chiabu.2003.07.006

Romano, E., & De Luca, R. V. (2001). Male sexual abuse: A review of effects, abuse characteristics, and links with later psychological functioning. *Aggression and Violent Behavior, 6,* 55-78.

Runyon, M. K., & Kenny, M. C. (2002). Relationship of attributional style, depression, and posttrauma distress among children who suffered physical or sexual abuse. *Child Maltreatment, 7,* 254-264.

Ryan, K. D., Kilmer, R. P., Cause, A. M., Watanabe, H., & Hoyt, D. R. (2000). Psychological consequences of child maltreatment in homeless adolescents: Untangling the unique effects of maltreatment and family environment. *Child Abuse & Neglect, 24*, 333-352.

Saunders, B. E. (2012). Determining the best practice for treating sexually victimized children. In P. Goodyear-Brown (Ed.), *Handbook of child sexual abuse* (pp. 173-197). Hoboken, NJ: John Wiley & Sons.

Sawyer, G. K., & Hansen, D. J. (2014). Heterogeneous symptom patterns of sexually abused children in treatment: Understanding the complexity of the problem. *Journal of Child Sexual Abuse,* 23, 900-917. doi:10.1080/10538712.2014.964439

Saywitz, K. J., Mannarino, A. P., Berliner, L., & Cohen, J. A. (2000). Treatment for sexually abused children and adolescents. *American Psychologist*, *55*, 1040-1049. doi:10.1037/0003-066X.55.9.1040

Schierholz, A., Krüger, A., Barenbrügge, J., & Ehring, T. (2016). What mediates the link between childhood maltreatment and depression? The role of emotion dysregulation, attachment, and attributional style. *European Journal of Psychotraumatology, 7*, 32652. Doi:10.3402/ejpt.v7.32652

Sedlar, G. (2001). *Heterogeneous Clinical Presentation of Sexually Abused Youth Presenting for Treatment: An Initial Examination of Clinical Subtypes and Correlates of Adjustment.* Unpublished doctoral dissertation. University of Nebraska-Lincoln.

Seehus, M., Clifton, J., & Rellini, A. H. (2015). The role of family environment and multiple forms of childhood abuse in the shaping of sexual function and

satisfaction in women. *Archives of Sexual Behavior, 44,* 1595-1608. doi:10.10007/s10508-014-0364-5

Seligman, M. E., Abramson, L. Y., Semmel, A., & von Baeyer, C. (1979). Depressive attributional style. *Journal of Abnormal Psychology, 88,* 242-247.

Sharma-Patel, K., & Brown, E. J. (2016). Emotion regulation and self-blame as mediators and moderators of trauma-specific treatment. *Psychology of Violence, 6,* 400-409.

Sheidow, A. J., Henry, D. B., Tolan, P. H., Strachan, M. K. (2014). The role of stress exposure and family functioning in internalizing outcomes of urban families. *Journal of Child and Family Studies, 23,* 1351-1365. doi:10.1007/s10826-013-9793-3

Steel, J., Sanna, L., Hammond, B., Whipple, J., & Cross, H. (2004). Psychological sequelae of childhood sexual abuse: Abuse-related characteristics, coping strategies, and attributional style. *Child Abuse & Neglect, 28,* 785-801. doi:10.1016/j.chiabu.2003.12.004

Stern, A. E., Lynch, D. L., Oates, R. K., O'Toole, B. I., & Cooney, G. (1995). Self-esteem, depression, behaviour, and family functioning in sexually abused children. *Journal of Child Psychology and Psychiatry, 36,* 1077-1089.

Stoltenborgh, M., van IJzendoorn, M. H., Euser, E. M., & Bakersmans-Kranenburg, M. J. (2011). A global perspective on child sexual abuse: Meta-analysis of prevalence around the world. *Child Maltreatment, 16,* 79-101. doi:10.1177/1077559511403920

Stroebel, S. S., O'Keefe, S. L., Beard, K. W., Kuo, S. Y., Swindell, S. V. S., & Kommor, M. J. (2012). Father-daughter incest: Data from an anonymous computerized

survey. *Journal of Child Sexual Abuse, 21,* 176-199. doi:10.1080/10538712.2012.654007

Taylor, J. E., & Harvey, S. T. (2010). A meta-analysis of the effects of psychotherapy with adults sexually abused in childhood. *Clinical Psychology Review, 30,* 749-767. doi:10.1016/j.cpr.2010.05.008

Toth, S. L., Cicchetti, D., & Kim, J. (2002). Relations among children's perceptions of maternal behavior, attributional styles, and behavioral symptomatology in maltreated children. *Journal of Abnormal Child Psychology, 30,* 487-500.

Townsend, C., & Rheingold, A. A. (2013). Estimating a child sexual abuse prevalence rate for practitioners: A review of child sexual abuse prevalence studies. Charleston, SC: Darkness to Light. Retrieved from www.D2L.org/1in10

Tremblay, C., Hebert, M., & Piche, C. (1999). Coping strategies and social support as mediators of consequences in child sexual abuse victims. *Child Abuse & Neglect, 23,* 929-945.

Trickett, P. K., & McBride-Chang, C. (1995). The developmental impact of different forms of child abuse and neglect. *Developmental Review, 15,* 311-337.

Trickett, P. K., Noll, J. G., Reiffman, A., & Putnam, F. W. (2001). Variants of intrafamilial sexual abuse experience: Implications for short- and long-term development. *Development of Psychopathology, 13,* 1001-1019.

Trickett, P. K., Reiffman, A., Horowitz, L. A., & Putnam, F. W. (1997). Characteristics of sexual abuse trauma and the prediction of developmental outcomes. In D. Cicchetti & S. L. Toth (Eds.), *Rochester symposium on developmental*

psychology, Vol. 8. Developmental perspectives on trauma: Theory, research, and intervention (pp. 289-314). Rochester, NY: University of Rochester Press.

Ullman, S. E. (2002). Social reactions to child sexual abuse disclosures: A critical review. *Journal of Child Sexual Abuse, 12,* 89-121. doi:10.1300/J070v12n01_05

Ullman, S. E. (2007). Relationship to perpetrator, disclosure, social reactions, and PTSD symptoms in child sexual abuse survivors. *Journal of Child Sexual Abuse, 16*, 19-36.

Valle, L. A., & Silovsky, J. F. (2002). Attributions and adjustment following child sexual and physical abuse. *Child Maltreatment, 7*, 9-25.

Weiner, B. (1995). Judgements of responsibility: A foundation for a theory of social conduct. New York: Guilford

Wolfe, V. V., Gentile, C., Michienzi, T., Sas, L., & Wolfe, D. A. (1991). The Children's Impact of Traumatic Events Scale: A measure of post-sexual abuse PTSD symptoms. *Behavioral Assessment, 13*, 359-383

Wolfe, D. A., Sas, L., & Wekerle, C. (1994). Factors associated with the development of posttraumatic stress disorder among child victims of sexual abuse. *Child Abuse & Neglect, 18*, 37-50.

Yancey, C. T., & Hansen, D. J. (2010). Relationship of personal, familial, and abuse-specific factors with outcome following childhood sexual abuse. *Aggression and Violent Behavior, 15,* 410-421. doi:10.1016/j.avb.2010.07.003

Yancey, T. C., Hansen, D. J., & Naufel, K. Z. (2011). Heterogeneity of individuals with a history of child sexual abuse: An examination of children presenting to treatment. *Journal of Child Sexual Abuse, 20*, 111-127.

Yancey, C. T., Naufel, K. Z., & Hansen, D. J. (2013). The relationship of personal, family, and abuse-specific factors to children's clinical presentation following childhood sexual abuse. *Journal of Family Violence, 28,* 31-42. doi:10.1007/s10896-012-9485-6

Young, R. E., Bergandi, T. A., & Titus, T. G. (1994). Comparison of the effects of sexual abuse on male and female latency-aged children. *Journal of Interpersonal Violence, 9*, 291-306.

Zajac, K., Ralston, M. E., & Smith, D. W. (2015). Maternal support following childhood sexual abuse: Associations with children's adjustment post-disclosure and at 9-month follow-up. *Child Abuse & Neglect, 44,* 66-75.

Zinzow, H., Seth, P., Jackson, J., Niehaus, A., & Fitzgerald, M. (2010). Abuse and parental characteristics, attributions of blame, and psychological adjustment in adult survivors of child sexual abuse. *Journal of Child Sexual Abuse, 19,* 79-98. doi:10.1080/10538710903485989